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Central Banks and Climate Change: Key Legal Issues

Mario Tamez, Hans Weenink, and Akihiro Yoshinaga

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Central Banks and Climate Change: Key Legal Issues
Prepared by Mario Tamez, Hans Weenink, and Akihiro Yoshinaga*

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ABSTRACT: Well-designed legal frameworks and institutional arrangments support the legitimacy of central banks' autonomous decision-making when grounded on sound legal basis and can prevent over-stepping in the remit of other authorities. This paper explores the key legal intersections of climate change and central banks. Climate change could impact price and finanical stability, which are at the core of a central bank's mandate. While central banks' legal frameworks can support climate change efforts they also determine the boundaries of the measures they can adopt. Central banks need to assess their mandate and authority under their current legal frameworks when considering measures to contribute to the global response to climate change, while taking actions to fulfill their legal mandates.

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WORKING PAPERS

Central Banks and Climate Change: Key Legal Issues

Prepared by Mario Tamez, Hans Weenink, and Akihiro Yoshinaga[1]

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I. Introduction

1. **Climate change is taking a central role in economic policy making.** The Parties to the United Nations Framework Convention on Climate Change have signed the Paris Agreement ("Agreement")—and more recently the COP28 Agreement reached in the UAE—which are landmark international binding treaties with the common goal to combat climate change and adapt to its effects. The Agreement aims to reduce the risk and impact of climate change, to hold the increase in the global average temperature to below 2ºC, preferably to limit the temperature increase to 1.5ºC above pre-industrial levels. The implementation of the Agreement requires economic and social transformation. Countries, through their nationally determined contributions, undertake climate change actions and communicate their efforts to build resilience to adapt to the impact of greenhouse-gas emissions.

2. **Climate change is increasingly acknowledged as a critical macroeconomic and financial policy challenge for the financial sector and the IMF's membership.** For the first time, both the G7 and G20 presidencies have included climate action among their policy priorities (the G20 has a Sustainable Finance Working Group). Central bank governors agreed on more systematic analysis to assess macroeconomic risks stemming from climate change and the international Central Banks and Supervisors Network for Greening the Financial System (NGFS), is sharing, on a voluntary basis, best practices on the development of environmental and climate risk management in the financial sector and ways to mobilize mainstream finance to support the transition towards a sustainable economy.[1] Similarly, the IMF has recognized its role in assisting its members in addressing those challenges and is actively contributing in each of its core areas of responsibility.[2]

3. **Physical and transition climate risks[3] have the potential of producing severe disruptions to price and financial stability or initiate the next systemic financial crisis,[4] which are at the core of a central bank's mandate.** This paper starts from the premise that the primary responsibility for the design and coordination of national contributions to the global response to climate change, rests with governments, and aims to discuss key legal questions regarding *whether and how central banks can integrate and support climate related policies into their core functions, under their current legal frameworks.* As such, given the prospective severity of climate change, while governments have committed to contribute to the response to climate change and have available a number of tools to pursue such endeavors (e.g., fiscal and industrial policies), central banks are facing mounting pressure to play an active role regarding climate policies, including to allocate financial resources to fight climate change. In that light, many central banks, acting within their existing legal frameworks, increasingly recognize that physical and transition risks could have a bearing in fulfilling their legal mandate, namely ensuring price and financial stability; therefore, a number of actions can and should be adopted to integrate climate change into their activities. However, the contours of the role each central bank could play in connection with climate change are determined by their specific legal regimes (in

[1] As of May 29th, 2024, the NGFS has 141 members and 21 observers.

[2] Climate change policies have been included into the Fund's operations, for instance in Article IVs consultations, lending facilities, and institutional arrangements for cooperation with other stakeholders. One of the main contributions is the recently established Resilience and Sustainability Trust (RST), that complements the Fund's lending toolkit and is established to provide policy support and affordable longer-term financing to strengthen the latter members' resilience and sustainability.

[3] Physical risks include the economic costs and financial losses resulting from the increasing severity and frequency of extreme climate change-related weather events as well as longer term progressive shifts of the climate. The concept of transitional risk relates to the process of adjustment towards a low-carbon economy; the process of reducing emissions is likely to have significant impact on all sectors of the economy affecting financial assets values. Network for Greening Financial System (2019a).

[4] Bolton et al (2020).

particular the legal construction of their mandates), the capacity and the resources of other national institutions, and their institutional interactions with the government. Thus, while central banks agree that they are not in the driving seat with respect to policies to address climate change, based on their existing mandates, central banks have adopted a number of actions to integrate climate change considerations in their policies. In laying out a conceptual framework on how central banks should cater for climate policies, this paper seeks to foster an intellectual dialogue on what is still an evolving area and aims to present the different approaches that have been followed. Policy makers commonly distinguish among mitigation, adaptation, and transition policies but these categories do not seem helpful to assess in all the cases the legality of central banks' climate actions. Therefore, unless specifically mentioned, this paper does not distinguish among mitigation, adaptation, and transformation policies.[5]

4. The starting point for the assessment of central banks' role in addressing climate change is that – being public institutions – they can legally only act within their legal mandate. As central banks generally have autonomy and are accountable for the implementation of the mandate assigned to them by the legislature, the legitimacy of their policy actions requires a clear legal framework that delineates their legal objectives, functions, and powers. It is for this reason that this paper centers on the criticality of well-designed central banks' legal mandates. A clear statutory mandate that indicates a hierarchy when multiple objectives are assigned and establishes the primacy of the price and financial stability objectives, is essential to provide legitimacy and legal certainty. Therefore, legal certainty regarding a central bank's mandate will limit the central bank's exposure to reputational, legal, and political risks. By contrast, engaging in climate related efforts in the event of a vague, or missing mandate might affect the central bank's autonomy and credibility, which remains necessary to protect its monetary policy from fiscal dominance.[6, 7]

5. The objective of this paper is to fill a gap by advancing the legal understanding on the intersection of central banks and climate change within their current legal mandate. Given that the debate on the intersection of central banking law and climate change is nascent, and the analytical work on this matter is emerging, this paper seeks to take stock of the central bank's role in pursuit of climate policies under their current legal frameworks, compare the different approaches, and identify what legal considerations may impact their decisions and policies. This paper, guided by central banks' international leading practices, focuses primarily on the different legal formulations of the central bank's objectives regarding price and financial stability, as well as support of the government's economic policy and economic development. In that

[5] According to the UNFCC, mitigation refers to the efforts to reduce emissions released into the atmosphere and in reducing the current concentration of carbon dioxide (CO2) and enhance sinks (e.g., increasing the area of forests). Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts (i.e., it refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change). In the context, it is recognized that both aspects will impact different economic actors and therefore a just transition is needed to ensure that the substantial benefits of a green economy transition are shared widely, while also supporting those who stand to lose economically. See UNFCCC (2020), UNFCCC (2022a) and UNFCCC (2022b). The IMF has utilized the following categories of climate policies (i) Mitigation—measures to contain and reduce emissions through policies—such as increasing carbon taxes, reducing fuel subsidies and improving regulation—; (ii) Adaptation - building financial and institutional resilience to natural disasters and extreme weather events, and infrastructure investments to cope with rising sea levels and other warming-related phenomena, and (iii) Transition to a low-carbon economy—including updating financial sector regulation to cover climate risk and exposure to 'brown' assets and adopting measures to help diversify economies away from carbon intensive industries while mitigating the social impact on affected communities. IMF (2022b).

[6] Honohan (2019).

[7] Note that the formulation of central bank objectives depends, *inter alia*, on the country's exchange rate regime. For instance, in officially dollarized/euroized jurisdictions, the objective of price stability has been outsourced to the Federal Reserve/ECB. In such a case the central bank's primary objective should be limited to fostering and maintaining a stable financial system. (Lönnberg and Jacomé (2010). Similar situation can be encountered on jurisdictions with a hard peg IMF (2022a).

light it aims to present potential legal tensions that central banks may be confronted with while adopting decisions related with climate policies within their statutory mandate. Recognizing that interpretation of a central bank's legal framework is incumbent upon each jurisdiction, this paper does not intend to present a set of permissible activities for central banks or express an opinion on whether any central bank has exceeded its mandate; instead, it reflects on the diverging approaches jurisdictions have adopted while contributing to the response to climate change.

6. This paper also analyzes the institutional arrangements that safeguard and support the central bank's actions. Central banks' actions regarding climate policies could raise questions on the boundaries between the realm of the central bank's autonomous decision-making and politically accountable bodies. The paper notes that well-designed institutional arrangements, grounded on a sound legal basis, support the legitimacy of central banks' autonomous decision-making and can prevent stepping into the remit of fiscal authorities.

7. This paper will not discuss broader societal responsibility issues or the exposure of the financial sector to environmental degradation – e.g., air pollution, water pollution and scarcity of fresh water, land contamination, reduced biodiversity, deforestation, etc. – which might be (in)directly linked to climate change.[8] Furthermore, this paper aims to present a legal analysis based on the research of selected climate change measures adopted or discussed by central banks in different jurisdictions that provide useful examples for the analysis of key legal issues and should not be interpreted as advocating for a specific policy choice, or as an exhaustive assessment of all the possible measures that central banks could or have adopted. This paper follows a comparative approach and discusses current law, recognizing that the law can always be changed. Note that the banking law aspects - i.e., those governing the mandate of supervisors and the legal framework governing banks—are covered in a parallel working paper on "Banking Law and Climate Change: Key Legal Issues". While the issues flagged in this paper—e.g., the decision-making arrangements, (operational) autonomy, transparency and accountability—are similarly applicable and critical for the banking supervisory agencies and the central bank, the parallel paper contains a more detailed discussion of these aspects for the banking supervisory authority.

8. This paper is structured as follows. A short first section will introduce the legal framework applicable to central banks and discuss a specific climate change related challenge. A second section will explore the impact of climate change policies on the mandate of central banks, with a particular focus on the different legal formulations of their assigned objectives and functions, and the approaches adopted by central banks. A third section discusses the interaction between central bank's institutional arrangements and climate change policies. Finally, the paper will offer some conclusions.

II. The Legal Framework of Central Banks and Climate Change

9. Central banks are public institutions with a specific, multi-layered legal framework that controls their governance and operations. Central banks are specialized public entities that are legally designed to pursue specific public goods—primarily price and financial stability, often under a hierarchical relationship between the two—in an autonomous manner. Central banks are assigned sovereign responsibilities and

[8] Network for Greening the Financial System (2019a).

granted powers to achieve their mandate, and accountable to political bodies; therefore, they are connected to but separate from government. Some commentators have argued that it is important to limit central bank mandates and to remain focused on price and financial stability.[9] A central bank's legal regime is typically established in a multi-layered framework that includes the constitution, an organic central bank law, other relevant laws, and secondary legal instruments (e.g., by-laws) adopted by central banks. While in some jurisdictions the constitution establishes the principal objectives and functions of a monetary authority,[10] the organic central bank law typically provides the comprehensive legal foundation for the establishment of the central bank, its objectives, functions and powers, its decision-making bodies, as well as its autonomy. Secondary legal instruments detail the different aspects of the central bank's governance and operations.

10. In that regard, a specific question arises as to whether climate change-related public international law provisions create obligations or constrain the actions of central banks. Legal actions have been filed to resolve this question. In particular, doubts arise on whether central banks must take into account international environmental protection requirements in their definition and implementation of monetary policy, and how they can ensure consistency between monetary policy and climate policy, in the context of climate obligations under international law, such as fundamental human rights.[11] Under the Agreement, governments are required to determine, submit, and update their nationally determined contributions to the response to global warming to achieve climate goals. An international agreement can create directly applicable obligations for public and private actors, including central banks. However, it is a matter of national constitutional law to indicate (i) whether and how international agreements supersede national law, (ii) whether environmental protection provisions determined in national constitutional law supersede domestic laws potentially in conflict with this objective, and (iii) if international agreements impose obligations on the central bank.[12] We will not explore these questions in this paper, but do note that commonly national governments will transpose their specific contributions arising from an international agreement into legally binding domestic laws which will then be binding on public and private actors. Furthermore, it should be recognized that climate related litigation has grown substantially since the adoption of the Agreement. Increasingly human rights cases are taking a central role into bringing climate-related litigation against governments,[13] and central banks, and their officials could also be exposed to such legal actions. As discussed in Box 1, one central bank has been sued in the lawcourts to press it towards greater inclusion of climate related concerns in their policymaking.[14]

[9] See Issing (2019), Skidelsky, (2021) and Cochrane (2020) who has argued that the extension of central bank mandates to encompass climate change concerns "will end badly" as this could *inter alia* impact their autonomy.

[10] See Section 224 of the Constitution of the Republic of South Africa.

[11] Berthier (2021).

[12] It is noted that based on Article 216 (2) of the Treaty on the Functioning of the European Union – which says that agreements concluded by the European Union are binding on European institutions – the European Parliament has concluded that "the ECB, as an EU institution, is bound by the EU's commitments under the Paris Agreement". It added that "tackling the climate and biodiversity emergency requires the ECB to take an integrated approach that should be reflected in all its policies, decisions and operations, together with adhering to its mandate of supporting the general economic policies of the Union, specifically, in this case, the achievement of a climate-neutral economy by 2050 at the latest, as outlined in the European Climate Law" (see *inter alia* paragraph 22 of the European Parliament resolution of February 16, 2022 on the ECB's annual report for 2021). The EU's European Climate Law (Regulation (EU) 2021/1119) is very clear that alignment with the objectives of the Paris Agreement requires action across an entire economy, See also Elderson (2022).

[13] Setzer and Higham (2023).

[14] Other financial authorities have also been subject to legal actions (ClientEarth v. Financial Conduct Authority (Ithaca Energy plc listing on London Stock Exchange). See NGFS (2023).

Box 1. ClientEarth v NBB

ClientEarth, a non-governmental organization, filed a suit against the *Banque Nationale de Belgique* (NBB) for failing to meet environmental, climate, and human rights requirements when purchasing bonds from greenhouse-gas intensive companies, while implementing the European Central Bank (ECB) and the European System of Central Banks (ESCB)'s Corporate Sector Purchase Programme (CSPP). Under the CSPP, six national central banks (Belgium, Germany, France, Spain, Italy, and Finland) purchase bonds from eligible companies to improve financing conditions by lowering debt costs. According to ClientEarth, given that the ECB failed to assess the climate impact of buying corporate assets, despite its legal obligations to do so, its decision to establish the CSPP would be invalid, and the NBB's implementation of this decision illegal. ClientEarth alleges that the ECB is both empowered and legally required to take proactive action on climate change on the basis that the ECB and ESCB:

(i) have a primary mandate to take action to mitigate systemic risks and help prevent them from materializing, given that climate change is a systemic risk that threatens both price stability and financial stability;

(ii) have to take into account the EU's climate objectives and policies and ensure it acts consistently with them, which necessarily involves reducing the impact of its programs on climate change and human rights, and supporting the transition to a net zero economy, and

(iii) need to mitigate the climate related financial risks to which its corporate asset portfolios are exposed.

ClientEarth claimed that the CSPP exacerbates the climate crisis, and that the NBB's participation in the CSPP, violated the Treaty on the Functioning of the European Union (TFEU) and the Charter of Fundamental Rights of the European Union (EU). Thus, ClientEarth pursued a preliminary reference to the Court of Justice of the EU to determine the validity of the CSPP under EU law. In December 2021, the Brussels Tribunal of First Instance rejected ClientEarth's application on procedural grounds. ClientEarth appealed the judgment and, after reforms to the Eurosystem's Corporate Sector Purchase Program, which tilted central banks' corporate bond purchases away from companies with poor climate performance to those with better ones, withdrew the case.

Sources: Grantham Research Institute on Climate Change and the Environment (London School of Economics) ClientEarth v. Belgian National Bank - Belgium - Climate Change Laws of the World (climate-laws.org), Linklaters (2021) and (2022), and ClientEarth (2021).

III. Statutory Mandates of Central Banks and Climate Change

A mandate is understood as an instruction from an authorized politically accountable body (e.g., legislature) that allocates responsibilities to a public authority to perform certain activities. A mandate comprises a clear and internally consistent set of objectives, functions, and powers (see Box 2). This section aims to present the key elements of a central bank's statutory mandate and discuss whether and how central banks can integrate and support climate related policies under their current legal frameworks.

11. A clear and well-defined legal mandate plays a critical role in delineating the contours of a central bank's actions. In the absence of a clear and robust mandate, central banks will likely be exposed to legal, reputational, and political risks as the central bank might be deemed as overstepping into the realm of

political bodies or not fulfilling its legally entrusted responsibilities.[15] The limitation of the central bank's activities to those which have been authorized is stated as a principle in various central bank laws and constitutions (Box 2 also provides examples of this principle). It remains generally accepted that, to be effective in the achievement of their mandates, central banks need to have a high degree of autonomy, which includes (as explained below in section IV) the concepts of institutional, functional, personal, and financial autonomy.[16] Moreover, a high degree of autonomy can only be achieved through commensurate levels of accountability tailored to the particularities of the central bank (discussed also in section IV).

Box 2. Legal Mandates of Central Banks: The Concept & Attribution of Powers

A central bank's mandate consists of three interlinked legal aspects: its objectives, functions, and powers. These three legal aspects are always enshrined in central bank laws, albeit sometimes under different labels.

Central bank *objectives* are the goals that a central bank is legally required to pursue by exercising its activities. The objectives commonly include the achievement and maintenance of price stability, contributing to financial stability and supporting the government's general economic policies. Central bank laws often establish a hierarchy among these objectives.

Central bank *functions* are the tasks that a central bank is legally entrusted with to achieve its objectives. Examples of core central bank functions are the definition and implementation of monetary policy, and the management of the official foreign reserves.

The concept of *powers* refers to specific legal powers that enable a central bank to implement its functions. These powers include the authorization to open accounts for counterparties, to purchase or sell outright securities, and to enter into collateralized lending and repurchase agreements with counterparties.

The principle of the attribution, or sometimes called conferral, of powers might not be recognized in all jurisdictions. Nevertheless, it is aligned with IMF staff's general advice for central bank laws to have clear mandates, and preferably explicit, and limited. This would also limit a central bank's ability to interpret its powers. This principle means that a public entity may only conduct, or participate in operations, for which it has received a mandate. Regarding the principle of the attribution of specific, limited powers to central banks, a clear example is found in Chapter 1, Article 5 of the Sveriges Riksbank Act which provides that it "may only conduct or participate in activities pursuant to Swedish or EU law". Also see Article 74(1) of the Law on the National Bank of Moldova that establishes "The Bank may not use its powers for purposes that exceed its competence and objective." In the case of the Autoriti Monetari Brunei Darussalam Order 2010 provides in Section 31 (1) that the Brunei Monetary Authority "shall not use any power accorded to it to serve an objective for which the power was not given and shall not use power in excess of that which is required to achieve the objective for which the power was given."

Turning to national constitutions, Article 19 of the Ukrainian Constitution provides that "Bodies of state power and bodies of local self-government and their officials are obliged to act only on the grounds, within the limits of authority, and in the manner envisaged by the Constitution and the laws of Ukraine." Article 226 of the Constitution of Ecuador contains a similar, clear limitation.

Finally, it is noted that the judiciary will have a role in reviewing, and constraining, the central banks' interpretation of their mandates (see Box 4 for some examples in the European context).

12. Central banks are increasingly adopting mission statements, or similar documents, that clarify, inter alia, their understanding and interpretation of their approach to climate change within their legal mandate. Mission statements are typically used to disclose the values and goals of institutions, in line with the

[15] "Taking on new goals, however worthy, without a clear statutory mandate would undermine the case for our independence" and "without explicit congressional legislation, it would be inappropriate for us to use our monetary policy or supervisory tools to promote a greener economy or to achieve other climate-based goals" in Powell (2023).

[16] Bossu et al (2017).

legal regime.[17] For example, the Reserve Bank of New Zealand's Statement of Intent 2021–2024 includes the recognition of "*the need to drive economic growth that also supports the environment. Understanding climate change and climate risks is of critical importance to financial stability. Climate change presents a long-term risk to financial stability, with the physical impacts of climate change.*" The Central Bank of Seychelles' mission statement mentions the need "*to contribute towards the sustainable economic growth and development of Seychelles through prudent monetary policy and maintenance of a sound financial system*". This reflects the Central Bank's core objectives. The mission statement of the Bank of Botswana includes contributing to the sound economic and financial well-being of the country. As a responsible corporate citizen, the Bank of Botswana's corporate social responsibility also allows contributions to the broader social development in Botswana. In this respect, the Bank will consider, albeit on a limited and selected basis, requests for financial support in the form of grants or donations. As noted, these documents sometimes refer to the incorporation of sustainable development and climate change into central banks' operations and policies, or the notion of corporate social responsibility.[18] However, it is doubtful that they include legally enforceable commitments, and in any event, mission statements cannot override statutory law. Moreover, such statements should not be deemed to mandate the central bank to initiate measures tailored to address climate change, i.e., beyond providing *ad hoc* support for individual unforeseen causes.[19]

A. Objectives

The central bank objectives are the goals that the central bank should aim to accomplish (the "why"). Central bank's organic laws provide for general objectives, that typically include the pursuit of price stability, financial stability and support for the economic policies of the government or economic development.

(i) Price Stability

13. **The primary objective of most central banks is to ensure price stability.** This is commonly defined as some aggregate measure of the prices of currently produced goods and services. In other words, monetary policy is geared towards the achievement of low and stable inflation.[20] Other macroeconomic goals such as exchange rate stability, economic growth and employment creation are also mentioned. To achieve these goals, central banks implement monetary policy relying on the identification of the shocks impacting the economy and on the assessment of inflationary pressures. [21]

[17] Mission statements or similar documents could be a useful instrument to (i) facilitate the interpretation and understanding the central bank's support to climate related policies, (ii) share the scope of its foreseen or assumed actions, and (iii) manage the stakeholders' expectations.

[18] Note that the notion of corporate social responsibility also informs central banks' efforts to green their own operations. For example, Bank of Canada is taking steps to measure and reduce its carbon footprint and to integrate climate change into planning and decision making. Bank of Canada is committed to reducing their buildings-related greenhouse gas emissions by eighty percent by 2030 (compared with 2018 levels) and achieving net zero operational carbon emissions by 2050 or sooner. In addition, Bank of Canada has committed to achieving near-zero waste across their owned buildings and supply chain by 2040 or sooner. Similarly, De Nederlandsche Bank (DNB) is integrating climate-related considerations into its business operations and DNB's Sustainability Plan includes a target for achieving by 2025 sustainable internal operations and ensuring that DNB's own investments are "Paris-aligned". Lowering the environmental impact of payments system is also listed as a target. De Nederlandsche Bank (2019).

[19] For example, in Article 76 of the Organic Law of the Bank of Mozambique (BM) allows limited grants or subsidies as budgeted in BM's budget. Based on this provision, the BM has in the past contributed to the rebuilding of a school damaged by a cyclone.

[20] Barro (1996).

[21] NGFS (2020b).

14. Some central banks' legal frameworks include explanations which can be understood as the rationale for price stability. For example, Section 224 of the South African Constitution instructs the South African Reserve Bank (SARB) to protect the value of the currency in the interest of balanced and sustainable growth. Another example is Section 3 of the Philippines Central Bank Act which defines price stability as the primary objective of the Bangko Sentral ng Pilipinas (BSP) which is "conducive to a balanced and sustainable growth of the economy and employment". As stated in the BSP webpage "price stability refers to a condition of low and stable inflation. By keeping price stable, the BSP helps ensure strong and sustainable economic growth and better living standards."

15. Climate change and the green transition have an impact on macroeconomic indicators influencing price stability, but this does not provide a separate mandate to finance climate-related policies. Climate risks are increasingly recognized as a source of risk to price stability, impacting the real economy, financial risk, market prices and consequently the conduct of monetary policy, as will be discussed in the context of the monetary policy function (see below paragraphs 31 *et seq.*). However, as noted by the Governor of the SARB the price stability mandate "reflects an understanding that *protecting the value of the currency is a critical foundation for achieving lasting growth*."[22] It follows that the central bank's monetary policy needs to remain focused on ensuring price stability. It is in the context of pursuing its price stability policy objective that the central bank's monetary policy framework should—similar to other macro-economic developments—take into account the impact of climate change on price stability. While this is a matter of national legal interpretation, the incorporation of climate considerations into monetary policy formulation does not automatically mandate central banks to utilize monetary policy instruments to finance climate change adaptation or mitigation measures. Indeed, it has been argued with respect to the U.S. Federal Reserve that Section 2A of the Federal Reserve Act, which specifies the Federal Reserve's monetary policy objectives, does not mention green goals as relevant additional considerations for monetary policy decisions.[23]

(ii) Financial Stability

16. Financial stability is paramount for economic growth. Financial stability is commonly defined as having a financial system that can withstand severe shocks and continue to provide financial services. It is also understood as the absence of periods where (i) banks are reluctant to grant credits, (ii) asset prices vary significantly, and (iii) there is a lack of certainty that payments would be fulfilled. Major financial instability severely undermines the confidence in the financial system, potentially leading to bank runs, inflation, or a stock market crash. Financial stability should be pursued within the constraints established in the legal framework and the judiciary will have a role in reviewing, and constraining, central banks' interpretation of their actions. The U.S. Federal Reserve has noted that promoting financial stability is a key element in meeting its

[22] Kganyago (2019).

[23] Section 2 A of the Federal Reserve Act defines the monetary policy objectives to include the "long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates" (this is an example of non-hierarchized objectives). The Federal Reserve's FOMC determines its longer-term inflation objective. The FOMC Statement on Longer-run Goals and Monetary Policy Strategy (as reaffirmed effective January 26, 2021) provides that "In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time". See Skinner (2021). In addition, "There are legal limits to what policy actions central banks can take and the Fed is no exception. In a society based on the rule of law, the Fed is bound to stay within the lanes of its statutory mandates (…). While climate change may be a significant economic problem or concern, the Fed's present authority in this space remains limited", *op cit.*, at page 1364.

dual mandate for monetary policy regarding full employment and stable prices.[24] The reason being that in an unstable financial system, adverse events are more likely to result in severe financial stress and disrupt the flow of credit, leading to high unemployment and great financial hardship. In addition, monitoring and assessing financial stability would also support the Federal Reserve's regulatory and supervisory activities, which promote the safety and soundness of the United States banks and other important financial institutions.[25]

17. Since the global financial crisis, financial stability is now commonly explicitly included as an objective in central bank's organic laws, often subordinated to price stability. One example of the legal formulation is found in Article 4 (1) of the Monetary Authority of Singapore Act that indicates "The principal objects of the Authority shall be—(a) to maintain price stability conducive to sustainable growth of the economy; (b) to foster a sound and reputable financial center and *to promote financial stability* …" As a second example, the Law on the National Bank of Ukraine in Article 6 states that "The NBU shall promote, within the limits of its authority, *the financial stability*, including stability of the banking system," without prejudice to the price stability objective. In addition, Article 2 of the Banco de Mexico Act indicates that the primary objective of the central bank shall be to seek the stability of the purchasing power of said currency. In addition, Banco de Mexico shall *promote the sound development of the financial system* and foster the proper functioning of payment systems.

18. The financial stability objective is usually pursued through a myriad of functions. In order to fulfill their financial stability objective, central bank laws typically provide for several functions and/or powers, including lender of last resort, statistical collection of information, and publication of financial stability reports. Micro prudential frameworks' primary objective is to promote the safety and soundness of supervised financial entities and, in connection with macroprudential policies, contributes to financial stability. As already noted, a parallel IMF working paper on "Banking Law and Climate Change: Key Legal Issues" discusses the micro prudential policies in more detail.

19. Policies that could have significant implications for price and financial stability are beyond the realm of the financial authorities. Macroprudential policies have a close relationship and complementarity with a wide range of policies, including monetary, and fiscal, and can provide a useful setting to exchange information, develop a common understanding and coordinate policies (e.g., climate or fiscal policies). Two specific objectives have been identified in the literature for macroprudential policies, namely (i) to increase the resilience of the financial system, and (ii) policies designed to address systemic risks by influencing banks' credit policies (albeit the case for the latter seems less clear cut).[26] Key issues to ensure the effectiveness of macroprudential policies include: (i) a clear definition of goals and scope of the macroprudential policy, (ii) macroprudential policy must be supported by strong supervision and enforcement and complemented by appropriate monetary, fiscal and other financial sector policies, (iii) it should include the ability to assess systemic risk, assemble and deploy the toolkit, monitor and close regulatory gaps, and close data and information gaps, and (iv) strong institutional and governance frameworks.[27]

[24] It is noted that in the U.S. no single agency has sole responsibility for ensuring financial stability. Instead, different agencies have various, specific responsibilities for financial stability. For example, the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act codified this macroprudential perspective for all financial regulators while giving the Federal Reserve a specific role; Haltom and Weinberg (2017).

[25] Federal Reserve Board (2020).

[26] Coelho and Restoy (2022).

[27] IMF (2013).

20. **Macroprudential responsibilities are typically assigned to the monetary authority or among different agencies, including the central bank.** Given its core stability objectives, macroprudential arrangements usually assign a key role for the central bank. As an example, the USA's Federal Reserve Board of Governors has established a Financial Stability Climate Committee (FSCC) to identify, assess, and address climate related risks to financial stability. This FSCC will approach this work from a macroprudential perspective—that is, one that considers the potential for complex interactions across the financial system. Similarly, the Reserve Bank of New Zealand's Climate Change Strategy published in 2018 includes an in-depth analysis of the potential implications of climate change for financial stability. In the same vein the Mexican Financial Stability Council (in which the central bank has a prominent role) approved the regulatory framework for the Sustainable Finance Committee, that aims to promote the transition towards sustainable finance and the adoption of international best practices that contribute to the stability of the financial system and has assessed the results of the analysis of the exposures of the banking system regarding climate and environmental risks.

21. **Consideration of climate change as a source of financial instability, potentially impinging on the central bank's mandate has increased.** Central banks, as well as financial supervisors and regulators, have gradually acknowledged the probable financial stability implications of climate change. Within their financial stability objective, their efforts have focused on integrating climate change considerations into the current frameworks for monitoring and prudential supervision, developing their methodological frameworks (e.g., stress-testing and scenario analysis), bridging data gaps, and raising awareness among financial sector firms of their exposure to climate risks.[28] As an example, the Reserve Bank of Australia monitors climate risks as part of its financial stability mandate. This involves efforts to incorporate the potential impacts of climate change into the outlook for the economy and monitoring the evolving risks to financial institutions.[29]

22. **To the extent that climate change–as well as other macroeconomic developments—have consequences for financial stability, central banks, acting within their mandate, can adopt actions to address their impact.** Many central banks have integrated climate considerations into their traditional financial stability frameworks and financial stability objectives; this was done without the need to adjust the central bank's legal mandate. While it is a matter of national legal interpretation, the incorporation of climate considerations does not seem to provide an independent mandate for the central bank to introduce measures to promote climate change policies, it is in the pursuit of its financial stability mandate that the central bank should integrate the impact of climate change. In any case to prevent potential legal, political, and reputational risks, central bank's actions should remain fully aligned with their legal framework.

(iii) Support of the Government's Economic Policy and Economic Development

23. **Many central bank's laws list central bank support to the government's economic policy or economic development as an objective, with different legal formulations.** A first example is found in Article 127(1) TFEU, which in addition to the primary objective of maintaining price stability it indicates that —without prejudice to the objective of price stability—the ECB and ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives laid down in Article 3 TEU. Article 3(3) TEU specifies that the EU shall work towards the sustainable development of the EU based on, *inter alia*, "*a high level of protection and improvement of the quality of the environment*". The Bank of England

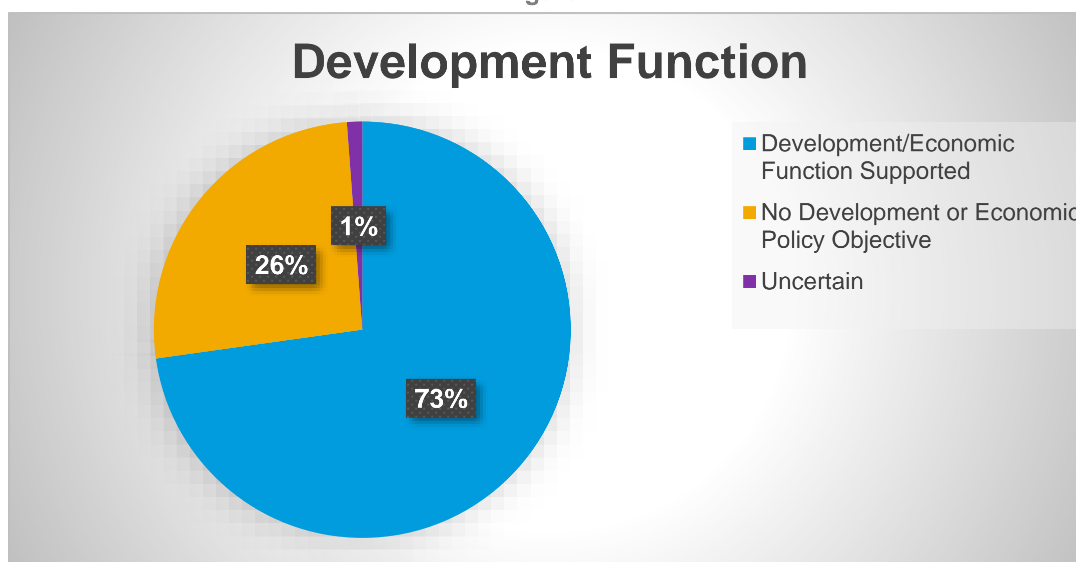
[28] Grünewald (2020).

[29] Reserve Bank of Australia (2019); Brainard (2021).

Act demonstrates another way how a central bank can be required to take the government's economic policy into account. Section 12 (1) of the Bank of England Act provides that the Chancellor may, by notice in writing to the Bank, specify "*what price stability is to be taken to consist of*" and, subject to that, "what economic policy is to be taken into account" by the Bank of England's Monetary Policy Committee (MPC). In November 22, 2023, the Chancellor updated the MPC's remit to explicitly "*confirm that the government's economic policy objective is to achieve strong, sustainable and balanced growth*". *In addition, to achieve to achieve strong, sustainable and balanced growth, the government's economic strategy consists of* "*supply side reforms to promote sustainable growth in all parts of the UK by supporting a dynamic business environment, increasing long-term energy security and delivering Net Zero".* In this manner the Bank of England's MPC has been explicitly mandated to incorporate environmental considerations into monetary policy decisions.

24. Nevertheless, an explicit reference to the government's environmental or climate policies is not common in central bank objectives, but a more general reference to governmental policy or to sustainable development is. An analysis of central banks' legal frameworks demonstrates that a majority of such laws include support to a government's economic policy or a developmental function (See Figure 1). Historically, the support of the government's economic policies was an expression of the need for central banks and the fiscal authorities to exchange information and to ensure the coordination of their respective monetary and fiscal policies.

Figure 1



Based on an analysis by IMF staff of 169 legal frameworks for central banks including monetary unions. Given the diversity of legal formulations among members, the analysis is necessarily general and stylized. IMF staff defer to members' authorities as to their interpretation of their own legal frameworks.

25. In the absence of an explicit legal provision that relates to a government's climate policy, legal uncertainty remains about a central bank's mandate to support such a policy. From a legal perspective it could be argued that a central bank's support in the context of the legal formulation related to "the government's economic policy", which is different from environmental and climate policies, does not provide a clear legal basis for a central bank's support to climate change policies. On the other hand, a government's economic policy might nowadays include climate or environmental related policies meaning that such a subsidiary objective might serve as a legal basis for specific central bank support to such policies. Nevertheless, as discussed below in paragraph 30, the need for legal certainty would favor the conclusion that,

if the legislature wants the central bank to pursue climate objectives, this would best be established by inserting an explicit reference to (sustainable) environmental policy in its (subsidiary) objective(s). Alternatively, the government could clarify explicitly that its economic policy includes environmental objectives, thereby serving to interpret the central bank's subsidiary objective. This need for legal certainty is demonstrated by the explicit change in 2021 to the law governing the Magyar Nemzeti Bank (MNB).[30]

26. It is submitted that an explicit objective consisting of support to the government's general economic policies, including environmental policy, does not necessarily establish an *independent* mandate to pursue measures to address climate change. A first consideration is that such an objective refers to *supporting* government policy, which recognizes that the primary responsibility for the pursuit of environmental policies resides with the government, and central banks could only play an ancillary role. In addition, and in line with this allocation of responsibilities between the government and the central bank, the abovementioned ECB/ESCB example illustrates a broader point about a hierarchy among the central bank's objectives by specifying that any support to the government's economic policies will have to be implemented *without prejudice to the primary objective of price stability*.[31] In general, central banks seem to agree that they are not policy makers with respect to dealing with climate change.

27. While legal clarity on the scope for central banks' climate related actions is served by clearly specifying a hierarchy among the assigned objectives, not all central bank laws include such a hierarchy. IMF staff consistently recommend including a well-defined hierarchy in central bank laws as multiple objectives could lead to conflicting policy decisions which might undermine price and financial stability. Also, in the absence of a prioritization between objectives, the central bank is arguably left with discretion regarding the prioritization and balancing of its assigned objectives. This might expose it to political and reputational risks in the event that third parties disagree with the policy choices adopted by the central bank.

28. As demonstrated in Figure 1, 73 percent of central bank laws, specifically those in emerging economies, contain broader mandates allowing them to conduct, in the terminology of Keynes, "promotional" activities, whether or not subordinated to other objectives.[32] These "promotional" activities are geared towards the development of the country's economy and society (see Box 3 that provides examples of a number of central bank operations undertaken in supporting climate change objectives). For example, Section 4 of the Bank of Botswana Act defines "first and foremost" monetary stability as the Bank of Botswana's objective and adds that *"insofar as it is not inconsistent (…) the Bank will also foster monetary, credit and financial conditions conducive to the orderly, balanced and sustained economic development of Botswana"*. Finally, the Bank of Botswana has a third objective, which must be exercised consistently with the previous objectives, namely the attainment of the country's national economic development goals. Note that the Bank of Botswana Act is a good example of the abovementioned need for a clear hierarchy between a central bank's multiple objectives as it puts monetary stability first. This hierarchy is similar to the one discussed earlier in the TFEU for the ECB/ESCB central banks. Another example is Section 5(1) of the Central Bank of Malaysia

[30] Article 3(2) of the amended Law on the MNB now clarifies that the objectives of the MNB, which already defines price stability as the MNB's primary objective, now also include (without prejudice to the primary objective), support to "the government's economic policy and its policy related to environmental sustainability, using instruments at its disposal".

[31] As President Lagarde of the European Central Bank has noted, the most important tools for addressing climate change are outside the scope of the ECB mandate. (Lagarde 2021).

[32] "Memorandum on Proposals for the Establishment of a State Bank in India", J.M. Keynes, 1913, as quoted in Dikau et al (2020).

Act 2009, which defines Bank Negara Malaysia's principal objectives as consisting of the promotion of "*monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy*".

29. A relevant legal consideration is that the concept of 'sustainable economic development' is a broad one and could cover social, and economic (e.g., financial inclusion or inequality) issues in addition to environmental ones. As has already been noted, concerns about climate change have only more recently come to the fore and it seems clear that the support for climate policies was not envisaged when the objectives of contributing to sustainable economic development were drafted. It could be argued that such developmental objectives have a dynamic nature in that government's economic policies or development policies inform their content. Nevertheless, the need for legal certainty would favor explicit wording enabling a central bank to support a government's climate change policy. To the extent that such economic or development policies also extend to climate matters, subject to national methods of legal interpretation, a case could be made that the reference to sustainable development could serve as legal basis for specific measures to support the government's response to climate change, with the caveat that this should fit within the recommended hierarchy of the central bank's objectives, fit within its functions and powers and be limited as the primary responsibility for the pursuit of environmental policies resides with the government (see paragraphs 24 and 25).[33] Finally, while it is recognized that the adaptation of societies and economies to the effects of climate change will require significant financial resources, it is doubtful whether the concept of sustainable economic development will be a clear mandate for a central bank to provide—potentially significant–financial resources to such adaptation.

[33] Similar arguments can be pondered when other issues that not been considered when drafting the central bank's legal framework
become relevant for sustainable economic development (e.g., technology and cyber risks).

Box 3. Examples of Central Bank Development Programs Supporting Climate Change Policies

- The Bangladesh Bank (BB) has been promoting green financing through concessional refinancing schemes and credit quotas for financial institutions as well as formulating guidelines for green banking and donor supported sector-specific transformational projects. In 2017, BB in consultation with banks, FIs and related stakeholders issued a product list consisting of 55 products as green products/projects/ initiatives. This product list reduces the gap between the bankers and the entrepreneurs. Later the term Sustainable Finance was introduced in Sustainable Finance Policy in 2020. This Policy clearly defines Sustainable Finance, and the lists of green product/projects/initiatives were enhanced to include 68 products/projects/ initiatives. In 2023, the lists were further enhanced to include 70 green products/projects/initiatives. The list covers a significant numbers of climate finance products; i.e., mainly the products in renewable energy, energy & resource efficiency, alternative energy, recycling & manufacturing of recyclable goods, environment friendly brick production, green & environment friendly establishment etc. sectors. The quota is 5 percent of all loan disbursement and investments for green financing and 20 percent of all loan disbursement and investment for Sustainable financing.

With this background in 2022, BB issued a Policy on Green Bond Financing for banks and non-bank FIs which creates ample opportunity for bank and non-bank FIs to be involved in climate financing (both mitigation and adaptation). To reduce the interest on the lending BB launched a number of refinance schemes. These are the Technology Development Fund (TDF) (BDT 10 billion), Green Transformation Fund (GTF) (BDT 50 billion, USD 200 million, Euro 200 million), Refinance Scheme for Green Products/Projects/Initiatives (BDT 4 billion), and the ADB supported Financing Brick Kiln Efficiency Improvement Project (USD 50 million). To motivate banks and FIs BB introduced Sustainability Rating for Banks and non-bank FIs in 2020. The names of the top banks and top NBFI were disclosed on the BB's website based on their sustainable activities in the particular year. In 2017, BB issued the Environmental Social Risk Management (ESRM) guideline incorporating social issues along with environmental issues. The guideline incorporated an excel based Environmental Social Due Diligence (ESDD), a checklist for measuring the associated environmental and social risks including climate risks in banks financing. The check list was generic, i.e., same for all industries. In 2022 BB also updated the ESRM guideline with 10 sectors specific ESDD check list. SFD and Credit Guarantee Department (CGD) of BB are jointly working to launch a Green Credit Guarantee Scheme with the assistance of the World Bank under Bangladesh Environmental Sustainability and Transformation (BEST) Project.[1]

- The Monetary Authority of Singapore (MAS) recognizes that issuers of green, social, sustainability and sustainability-linked bonds may have to bear additional costs, as they engage external reviewers to ascertain their green, social, sustainability and sustainability-linked bond status. Based on its mandate to develop Singapore as a competitive international financial center, MAS operates a Sustainable Bond Grant Scheme which defrays the cost of external reviews to demonstrate the alignment of sustainability bonds with international standards. More than S$8 billion in green, social and sustainability bonds have been issued in Singapore since the introduction of the Scheme in 2017. MAS announced its intention to launch a grant to support sustainability-linked loans.[2]

- The Bank Negara Malaysia, taking into account the fact that its objectives include an explicit reference to sustainable growth, has worked closely as an adviser with the Ministry of Finance and the Ministry of Energy, Green Technology and Water to establish the Governmental Green Technology Financing Scheme (GTFS). The scheme started with an initial allocation of RM1.5 billion and was later increased with an additional RM2.0 billion. The scheme is structured to reduce the financial risk borne by the participating institutions (e.g., all Commercial Financial Institutions, Islamic Financial Institutions and Development Financial Institutions as per BNM & other participating entities duly approved by Ministry of Finance), as the Government guarantees 60 percent of the financing amount via Credit Guarantee Corporation Malaysia Berhad (CGC) and bears 2 percent of the total interest or profit rate. This financing framework aims to improve the preconditions for the participating institutions to finance viable and innovative green technology companies.[3]

- The Bank of Korea has published a paper noting that "to encourage a smooth supply of funds to the eco-friendly sector", Bank of Korea will "seek ways to utilize lending, payment and settlement and open market operations". In this context Bank of Korea is considering support for "green growth companies" through its bank intermediation support facility.[4]

- The Banco Central do Brasil's (BCB) new sustainability agenda foresees a fundamental role for the BCB in the allocation of resources directed towards the development of a more sustainable, dynamic, and modern economy. Specifically, the BCB has established a sustainable liquidity facility.[5] This involves a feasibility study, analysis and subsequent implementation of new facility for financial institutions whose eligible collateral include private equity and credit claims.

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[1] Bangladesh Bank (2020), and FIs, 2022 and SFD Circulars of Bangladesh Banks.

[2] Menon (2020).

[3] See the Green Technology Financing Scheme (as reviewed in July 2024).

[4] Bank of Korea (2021).

[5] Central Bank of Brazil (as reviewed in July 2024).

30. As the concept of a central bank's developmental role is evolving, legal certainty would argue in favor of ensuring a clear (subsidiary) objective for a central bank to take a more prominent role in addressing climate change concerns insofar as the legislature wants to assign that role to the central bank. In considering this, the following legal issues need careful reflection.

- As already noted, the primary political responsibility for addressing the climate risks rests, and should remain, with the government and the fiscal purse. Central banks' programs geared to address climate concerns (irrespective of whether these are designed in the context of climate adaptation, mitigation, or transformation policies) could be qualified as quasi-fiscal operations if the central bank lends instead of the government (see also paragraphs 34 *et seq.* below).
- In addition, if not well designed, these programs could create market distortionary effects. As discussed in Box 4, non-compliance with the principles of proportionality, objectivity and non-discrimination might expose a central bank to political, reputational, and legal risks in the event that third parties disagree with the operational decisions of the central bank.
- These issues involve difficult and sensitive trade-offs between different policies and the distinction between monetary policy and fiscal policy remains important. In doing so, developmental objectives could potentially overburden central bank mandates and risk undermining central bank's autonomy which is very important to achieve price stability. In any event the allocation of such objectives to a central bank merit – in view of the associated risks—high levels of transparency by the central bank (see also the discussion later about accountability and transparency in section IV).

Box 4. The Principles of Proportionality, Objectivity, and Non-discrimination

Central bank operations that are actively geared towards supporting climate change policies could, if not well designed, create market distortionary effects and run counter to the principles of proportionality, objectivity, and non-discrimination.[1]

While these principles are explicitly laid down in various central banks' laws, in other jurisdictions general principles of administrative law are applicable and also govern the operations of a central bank. In practical legal terms the distinction would not be that significant, as they should be seen as providing guidance for the sound and objective operation of a central bank.

As regards the EU, Article 127 TFEU provides that the ECB and ESCB shall act in accordance with the principle of an open market economy with free competition, favoring an efficient allocation of resources. Market neutrality "forms part of the principle of an open market economy with free competition", [2] meaning that a central bank should not interfere in the allocation of market resources.

The ECB has argued that this wording would not prevent the ECB and ESCB from incorporating climate sustainability considerations into their monetary policy as the ECB and ESCB are also, as already noted, required to support the general economic policies in the Union, which include, *inter alia*, the sustainable development of the EU based on "a high level of protection and improvement of the quality of the environment".[3]

The concept of market neutrality is a dynamic one and it has been argued that "there is increasingly persuasive evidence that market prices materially under-estimate the risks and the opportunities associated with the transition to net zero. That creates a divergence between today's view of market neutrality and how a portfolio might look if prices did properly reflect those factors".[4] The upshot would be that insofar as markets would not appropriately factor in climate risks, a central bank would be able to take these into account in its asset purchase, and collateral policies. Of course, the legitimacy of such decisions would depend on the degree of confidence and objective nature of a determination that markets do not correct price in such risks. A related legal question—which needs to be analyzed in the context of domestic legal frameworks – is whether the dynamic concept of market neutrality allows a central bank to pro-actively steer financial markets towards green assets.

Other central bank laws stress the need for the central bank to adopt its decisions in an objective, non-discriminatory, and proportionate manner. In practical terms, these principles would preclude comparable situations from being treated differently, and different situations from being treated in the same way, unless such treatment can be objectively justified.

As a matter of sound administrative practices, decisions need to be justified and should ensure that, whenever the central bank acts, the means chosen are suitable, necessary, and well adapted to achieve the ends it pursues; in other words, the decisions should be proportional.

An example of the legal formulation can be found in Section 31 (1) of the Autoriti Monetari Brunei Darusssalam Order 2010 according to which the Monetary Authority of Brunei must use the powers given to it equitably and uniformly and in accordance with sound administrative practices. It adds that the decisions of the Authority shall be impartial and shall be motivated only by objective and rational considerations. Similarly, Article 9(2) of the Law on the National Bank of the Republic of North Macedonia provides that the decisions of the National Bank "shall be impartial and based only on objective and rational considerations. They shall be executed in a fair, indiscriminatory and deliberate fashion". Finally, Article 74 (2) of the National Bank of Moldova requires the decisions of the National Bank, to be impartial, based merely on objective reasons and shall be strictly and correctly executed.

As noted, such principles are not only found in central bank laws, but also found in administrative laws of various jurisdictions (but can also be found in the principles of English common law for instance). For instance, Sveriges Riksbank is defined as an administrative authority, which is covered by the requirements of legality, objectivity, and proportionality as stated in the Administrative Procedure Act.

Indeed, even where a central bank law is silent on these principles, there is a general recognition that it is important for a central bank to take decisions in a proportional, non-discriminatory manner. This is illustrated by the statement from the Bank of Japan that highlighted that "in taking actions from the monetary policy side, the Bank deems it important to give consideration to market neutrality".[5]

Box 4. The Principles of Proportionality, Objectivity, and Non-discrimination *(Continued)*

The principle of proportionality has been used by both the German Constitutional Court and the Court of Justice of the EU to determine a controversial issue, namely the legality of the ECB's and the ESCB's monetary policy; - the Outright Monetary Transactions in Secondary Sovereign Markets (OMT) and the Secondary Markets Public Sector Asset Purchase Program (PSPP). These Courts came to differing conclusions on the question at hand, while using similar definitions of proportionality. For example, the German Constitutional Court held that this principle is of great importance "with regard to the principles of democracy and the sovereignty of the people" and went on to rule that proportionality is only satisfied if it constitutes a "suitable and necessary means for achieving the aim pursued". The Court of Justice of the EU stressed that the principle of proportionality requires that acts of the EU institutions should be suitable for attaining the legitimate objectives pursued by the legislation at issue and should not go beyond what is necessary to achieve those objectives.[6]

The need for a central bank to adopt its decisions in an impartial, objective and proportional manner illustrates the need for transparency in this respect (see section IV for a discussion of the IMF Central Bank Transparency Code).

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[1] Anwar et al. (2020), and Deutsche Bundesbank (2019).

[2] Opinion of Advocate General C- 493/17, Weiss and others, paragraph 76.

[3] Schnabel (2021).

[4] Bank of England (2021b).

[5] Policy Board of the Bank of Japan (2021).

[6] Judgment of the Court of Justice Gauweiler and others, C-62/ 14, paragraph 67. Similarly, Judgment of the Court of Justice of the EU in Weiss and others, C-493/17, and the Judgment of the German Constitutional Court, Second Senate in the joined Cases 2 BvR 859/15, 1651/15, 2006/15, 980/16 of July 31, 2019.

B. Functions and Powers

The functions are the areas of activities that an authority will be responsible for in order to achieve its defined objectives (the "what"). Central bank's organic laws often establish a list of core functions, such as (i) the formulation and implementation of monetary policy, (ii) granting credit to the government, (iii) providing advice to the government, and (iv) holding and managing the official foreign reserves (OFR). In complement, the powers are the specific legal tools at the disposal of an authority to implement its functions (the "how"). These powers confer legal capacity to carry out the functions in a manner that is consistent with the stated objective.

(i) Monetary Policy and Monetary Operations

31. The most important function of the central bank is to formulate monetary policy, which they mainly implement through a set of (sometimes complex) financial operations. Central banks' organic laws typically include a broad legal formulation to provide for monetary policy and operations. In that context, the legal regime determines the terms of the operations that the central bank can enter into with the aim of implementing monetary policy, including the set of authorized counterparties, transactions and assets that can

be subject to such transactions.[34] Organic laws typically include the following *powers* that enable a central bank to implement the monetary policy function: outright sales and purchases, repurchase agreements, Lombard loans, swaps and other derivative transactions.

32. Climate risks are increasingly providing impacts relevant for the formulation of monetary policy decisions and the implementation of these decisions via the aforementioned powers. Climate shocks can impact supply and demand and monetary transmission channels can be affected. Specifically, the short-to medium-term consequences of weather events and gradual global warming, as well as the transition towards a carbon neutral economy will have different influences on variables such as output, investment, employment, consumption, growth, productivity, wages, international trade and inflation; all of which are relevant factors for determining the central bank's monetary policy stance.[35] Climate change can also have longer term impacts on economic variables relevant for monetary policy. It is beyond the scope of this paper to review how monetary policy experts will incorporate short and longer-term effects into monetary policy decisions. The impact of climate and environment risks on price stability remains the subject of on-going research,[36] and the occurrence of physical and transition risks will be incorporated in econometric modelling and the preparation of monetary policy decisions.[37] As central bankers have a duty to ensure price stability, incorporating these effects into monetary policy appear fully germane with the central bank's core objective and does neither raise any legal concerns, nor does it have any bearing on the wording of central bank laws. While approaches differ, several central banks, in the pursuit of their price stability mandate, have incorporated climate related considerations into their monetary policy frameworks for eligible assets, collateral, and risk management frameworks (see Box 5, which presents a number of examples of inclusion of climate change considerations into their monetary policy frameworks; in other words, this supports these central banks' price stability objective).

[34] Bossu and Weenink (2021).

[35] Network for Greening the Financial System (2020a) As a concrete example, a recent research paper published by the Reserve Bank of India includes empirical data demonstrating the impact of climate change on food prices and indicators of real economic activity. Dilip and Kundu (2020).

[36] Network for Greening the Financial System (2020b).

[37] The Reserve Bank of New Zealand's Climate Change Strategy includes the commitment to consider the impact of climate change policies and private sector adaptation to climate change on inflation and labor market outcomes as per the mandate of monetary policy. Similarly, the Reserve Bank of Australia monitors climate risks as part of its monetary policy mandate Reserve Bank of Australia (2019). Brainard (2019).

Box 5. Country Examples of Inclusion of Climate Change Considerations into their Monetary Policy Frameworks

- China—In April 2021 the People's Bank of China (PBoC) announced that it is introducing a range of new measures aimed at greening the PBoC's monetary and financial policies. Green bonds and green credit will now be included as eligible collateral for the central bank's lending facilities, investments will be limited in high-carbon assets, and more green bonds will be added to China's foreign exchange reserves. In 2021, the PBOC launched the carbon emission reduction facility (CERF); a structural monetary policy instrument that aims to provide low-cost funds to financial institutions and guide them to extend carbon reduction loans at rates close to the Loan Prime Rate of the same maturity.[1]
- United Kingdom—Following the changes to the Bank of England's monetary policy remit, the Bank of England published a Market Notice in November 2021 which includes targeting a 25 percent reduction in the weighted average carbon intensity of its Corporate Bonds Portfolio Scheme (CBPS) by 2025, and full alignment with net zero by 2050.[2] Firms will also need to satisfy climate-related eligibility criteria for their bonds to be purchased by the CBPS, with purchases of eligible firms' debt being "tilted" towards the stronger climate performers within their sectors.
- ECB/ESCB—The 2021 review of the ECB/ESCB' monetary policy strategy noted *inter alia* that addressing climate is a policy priority for the EU. Hence, the ECB/ESCB has decided to (i) develop its macro-economic modelling and statistics of climate change, and (ii) adapt the design of its monetary policy operational framework in relation to disclosures, risk assessment, corporate sector asset purchases and the collateral framework. Its climate action plan details different phases and their timeframes for the incorporation of climate considerations into its monetary policy. The ECB's Governing Council decided the following concrete steps to be implemented over time, starting with October 2022: (i) gradually reinvest its corporate bond holdings to issuers with better climate performance (measured by looking at lower greenhouse gas emissions, more ambitious carbon reduction targets and better climate-related disclosures), (ii) limit in the collateral framework the share of assets issued by entities with a high carbon footprint and consider climate risks when reviewing corporate bonds' haircuts, (iii) define compliance with the EU's Corporate Sustainability Reporting Directive as an eligibility requirement for credit claims and marketable assets used for collateral, [3] and (iv) enhance its risk assessment tools and capabilities to include climate-related risks.[4]
- Japan—The Bank of Japan (BOJ) issued the Strategy on Climate Change in July 2021, which states its intention of furthering efforts on climate change, consistent with its mandate of achieving price stability and ensuring the stability of the financial system. With regard to monetary policy, the BOJ indicated that climate change could exert an extremely large impact on developments in economic activity and prices as well as financial conditions from a medium- to long-term perspective. Thus, supporting the private sector's efforts on climate change, from a central bank standpoint, will contribute to stabilizing the macroeconomy in the long run. With such considerations, it introduced a new fund-provisioning measure, under which the BOJ provides funds to financial institutions against investment or loans they make to address climate change. The framework was designed to give "consideration to market neutrality and avoiding direct involvement in micro-level resource allocation as much as possible" and "respond flexibly to changes in the situation under the fluid external environment surrounding climate change issues". Accordingly, under the new fund-provisioning measure, financial institutions themselves make decisions on which investment or loans contribute to addressing climate change while complying with corresponding international standards or the Japanese government's guidelines. The first loans, worth JPY 2.05 trillion (USD 18 billion), were disbursed on
24 December 2021 and will mature on 30 January 2023.[5]
- Canada—The Bank of Canada's climate change commitments for COP26 include assessing the effects of climate change on the macroeconomy and price stability. Specifically, the Bank of Canada is conducting research and developing new models and data sources to better understand climate-related physical and transition effects (i.e., the implications of (i) more frequent disruptions from severe weather events, and(ii) the transition to low carbon growth for potential output, the labor market and inflation), on the Canadian economy.[6]

Box 5. Country Examples of Inclusion of Climate Change Considerations into their Monetary Policy Frameworks *(Continued)*

- Sweden—When Sveriges Riksbank announced the decision of its Executive Board to continue asset purchases for the second half of 2022, the Riksbank clarified that within the amount allocated for the purchase of government, municipal, and non-financial corporate bonds, the Riksbank may continue to purchase green government, municipal, and corporate bonds. The announcement also stated that as of September 1, 2022, the Riksbank would only purchase non-financial corporate bonds issued by companies that report the annual direct and indirect emissions of greenhouse gases in accordance with the recommendations of the Task Force for Climate related Financial Disclosures. The Riksbank's Asset purchase program finished 31 December 2022.[7]

[1] The People's Bank of China (2021).

[2] Bank of England (2021a).

[3] This Directive applies to all large companies, listed companies and SMEs. The application of the reporting requirements will be phased in gradually for different corporations subject to the Directive.

[4] ECB (2022). These updates earlier ECB work on the topic, see *inter alia* point 10, ECB (2021a) and (2021b).

[5] Bank of Japan (2021a), Bank of Japan (2021b). Kuroda (2021).

[6] Bank of Canada (2021).

[7] Riksbank (2022).

33. When incorporating climate risks in monetary policy decisions, the central bank's actions should fit within their legal mandate. When climate change could affect the value and risk profile of the assets on the central bank's balance sheet, to fulfill their duties, their decision-making bodies should evaluate these potential material risks when the eligibility of assets is determined for use as collateral and as part of asset purchase programs for monetary policy purposes. However, insofar as central banks would do so with a view to pursuing specific goals (e.g., climate policies), this would have to fit in its legal regime, which provides the guiding framework for central banks' functions and powers. Specifically, green QE purchases should fit within the central bank's price stability mandate to mitigate the potential reputational, political, and legal risks to which the central bank would otherwise be exposed. It is a technical, economic decision how and whether "green" assets should be eligible (or not) as monetary policy collateral or assets purchased as part of monetary policy operations. In this respect, a central bank should be careful that such decisions should not impair monetary policy effectiveness and reduce the central bank's ability to achieve its mandated objectives, especially if implemented before the pool of available "green" assets is sufficiently deep. Furthermore, in those jurisdictions where the central bank law, or applicable principles of administrative law, prescribe proportionality, non-discrimination, or objectivity in adopting decisions (see Box 4), green QE policies should of course comply with them. In this respect, it is a relevant question which scientific basis underlies labelling assets as "green". In the absence of taxonomies that can objectively identify environmentally sustainable economic activities, and which are established by a politically accountable body with a sound scientific basis, the use of "green" assets could expose a central bank to reputational criticism (see also paragraph 54) and they might subject the central bank to political and legal risks. This would be particularly relevant if central banks were to treat "green" assets more favorably than other assets (e.g., lower haircut) even if there are no financial foundations for such difference in treatment. Also, the literature has stressed that a precondition for green QE policies is the need for

(i) a central bank to be autonomous, and (ii) the jurisdiction to have credible macro-economic policies.[38] Finally, as central banks have now transitioned from QE to Quantitative Tightening, this "will drastically reduce any opportunity to engage in 'green' asset prioritization for monetary policy operations, or for sustainability agendas based upon the exclusion of certain 'brown' assets from these bond-buying programmes."[39]

(ii) Credit to the Government and Quasi-fiscal Operations

34. Currently, many central bank laws prohibit monetary financing, or strictly curtail it. For example, Article 123 of the TFEU provides that the ECB and the national central banks of the ESCB may not grant public entities any type of credit facility or purchase debt instruments directly from them.[40] An example in law of a restriction on possible monetary financing is found in Section 39 of the Reserve Bank of Malawi Act which limits the Reserve Bank's short-term advances to the government to coverage of temporary shortfalls in budget revenues up to a maximum of 10 percent of the average inflation adjusted annual domestic revenue of the government for the past three financial years. Section 28 adds the restriction that the Reserve Bank can only purchase government securities on the secondary markets (as part of monetary policy operations).[41] These prohibitions, and strict controls of credit to government are important as in their absence, monetary financing may pave the way for fiscal dominance.[42] As discussed in a separate paper, during the Covid–19 pandemic, various central banks did exceptionally provide some limited credit to the government (albeit mostly in the form of advances to the Government or the purchase of government bonds on the secondary market).[43]

35. A minority of central bank laws allow for exceptions to the prohibition or limitation of monetary financing so as to allow the central bank to provide funding directly to the government to mitigate severe, unforeseen emergencies, subject to preconditions. For example, the Central Bank Act of the Seychelles allows advances to the government only within the limits set by the Board of Directors of the central bank and to address "temporary deficiencies in revenue." However, Section 40A of the Central Bank Act of the Seychelles allows for a temporary waiver of those limits in emergencies, which *explicitly include natural disasters*, *with robust procedural* guarantees in the form of a report of the Ministry of Finance on the causes for the waiver, presidential approval, and publication of the latter. Substantial safeguards also apply in terms of rates and compatibility with the monetary policy objective.[44] Another example in law of exceptional, temporary

[38] Arndt et al. (2020).

[39] Cullen (2023).

[40] Another example of a prohibition of monetary financing is Article 36 of the Statute of the Central Bank of West African States (BCEAO): "The central bank is prohibited from providing monetary financing to public Treasuries, local government or any other public bodies of the member states of the monetary union for West Africa (UMOA)".

[41] Section 46(1) of the Central Bank of Kenya Act clarifies that the Bank "may make direct advances to the Government for the purpose of offsetting fluctuations between receipts from the budgeted revenue and payments of the Government." Such advances "must be secured with negotiable securities issued by the Government", "bear interest rate at market rate", "be made solely for the purpose of providing temporary accommodation to the Government" and "shall not exceed 5 % of gross recurrent revenue (…) for the latest year for which those Accounts have been audited."

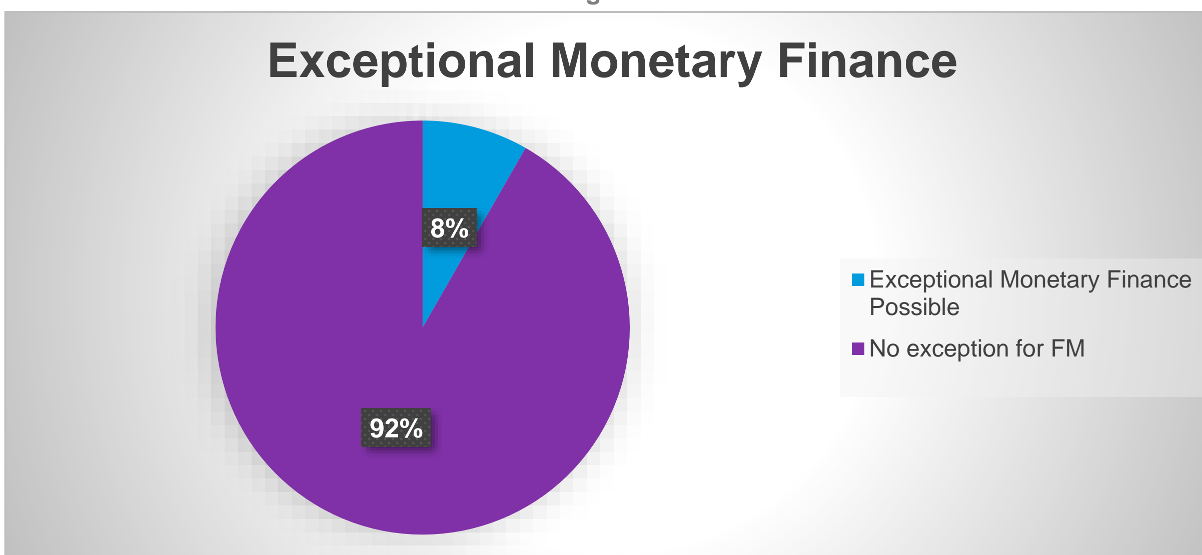
[42] Agur et al. (2022).

[43] Bossu and Weenink (2021).

[44] While not being an example of temporary monetary financing, but more of quasi-fiscal operations, the Natural Disaster Rehabilitation Facility established in February 2016 by the Reserve Bank of Fiji has a similar intent, namely temporarily addressing the effects of a natural disaster. This Facility is for the use of commercial banks and licensed credit institutions and enables them to provide funding to businesses and homeowners affected by a tropical storm.

monetary financing in the event of an emergency is found in Section 62 (2) of the Bank of Barbados Act which provides that when a public emergency is declared in Barbados, the Bank may purchase marketable securities issued by the government or any publicly owned institution on the primary market where the total amount of government debt acquired by the Bank pursuant to this section does not exceed 3 percent of gross domestic product. The securities acquired shall have a specified maturity of a maximum of up to 5 years and must be issued at prevailing market rates. The Act requires repayment in cash and prohibits the rolling over, or renewal of the securities. There are currently 8 percent of central bank laws which allow temporary exceptions to the general rules on monetary financing in the event of an unforeseen emergency, which may be defined as a natural or public health disaster (See Figure 2).[45] Note that the examples given are from island nations prone to damage from natural disasters (e.g., hurricanes/cyclones). A similar provision might be useful in other jurisdictions facing similar unforeseen, natural disaster risks.

Figure 2



Based on an analysis by IMF staff of 169 legal frameworks for central banks including monetary unions. Given the diversity of legal formulations among members the analysis is necessarily general and stylized. IMF staff defer to members' authorities as to their interpretation of their own legal frameworks.

36. While maintaining strict control of monetary financing, a provision allowing temporary monetary financing in the event of unforeseen natural disasters could therefore be considered for inclusion in central bank laws, with robust safeguards in place. Such a provision might be necessary particularly when the existing exceptional monetary financing provision cannot be interpreted broadly enough to allow a response to natural disasters, including events that could be related with climate. An appropriate *ex ante* institutional mechanism could be included in the central bank allowing the central bank to temporarily—under specific terms and criteria—fund the costs incurred by a government in the event of severe, unforeseen emergencies, such as a natural disaster; the law would maintain restrictions on monetary financing in normal

[45] In some other central bank laws, the definition of an emergency refers to war or a state of unrest. For example, Section 27 of the Basic Constitutional Act of the Central Bank of Chile contains an exception to the prohibition of monetary finance in the event of a foreign war or threat of foreign war as qualified by the Council on National Security. In such an emergency the central bank may obtain, confer, or finance credits to the State and to public or private entities. During the pandemic, a constitutional reform was approved to allow the central bank to buy bonds issued by the Chilean Treasury in the secondary market to help offset the fallout from the COVID-19 crisis.

times. Any exceptional monetary financing (either in the form of purchases of government securities or loans) should be temporary and the law should require that the ceiling, repayment, and (market) interest rate for such temporary funding be agreed explicitly. In line with the Seychelles and Barbados legal formulation examples, any temporary monetary financing should also be without prejudice to the objective of price stability and public debt levels. Finally, the central bank should be transparent on the use of this temporary exception to the prohibition and observe any limitations and procedures for monetary financing by the central bank.

37. Temporary monetary financing in the event of unforeseen natural disasters must be distinguished from the broader issue of direct monetary financing of climate-related policies. It is important to stress that the abovementioned temporary monetary financing is meant for the alleviation of temporary effects of specific unforeseen natural disasters. Such provisions were not designed to consider aspects related to the support of long-term horizon events, including climate change policies. Moreover, it remains primarily the role of governments to establish dedicated funds which could be used to finance climate mitigation and adaptation measures. In this light, it appears difficult to argue, form a legal standpoint, that such limited exceptions to monetary financing provisions would allow a broad financing role of the central bank to support the governmental climate change mitigation, adaptation, and transition policies.

38. In addition, temporary monetary financing should also be differentiated from quasi-fiscal operations. It has been recognized that central banks may, in theory, play an important role as agents of fiscal policy. Such operations could have important allocative effects and affect the overall public sector balance without affecting the budget deficit as conventionally measured.[46] It has been questioned whether climate change might be tackled by assigning financial resources to support specific policies (e.g., sustainable financing), through quasi-fiscal operations. However, the extent of such measures needs careful reflection as quasi-fiscal operations may also give rise to specific reputational and financial risks for the central bank.[47] For instance, if engaged in buying bonds or providing credit to a specific industry or sector other than for carrying out the functions previously discussed, the central bank will need to be able to objectively demonstrate that it treats comparable entities equally (i.e., if applicable, the concept of market neutrality has been observed), and financial losses caused by such measures could put in question the financial autonomy of the central bank. Also, quasi-fiscal operations could create fiscal dominance and risk the central bank losing control over its own balance sheet. In view of these considerations and given that quasi-fiscal operations typically do not play a role in monetary policy transmission, central banks' legal framework should safeguard the central bank; on that basis IMF staff has consistently cautioned against the use of central bank's assets for objectives that depart from monetary or financial stability. Furthermore, staff has advised for those cases in which central bank assets are nevertheless used in exceptional circumstances (e.g., crisis management), to increase the transparency and accountability of such operations, and to establish appropriate legal design features to mitigate risks; in other words, to shift the main financial risk to the government and protect the autonomy and financial soundness of the central bank, such as:

- Providing an explicit State guarantee for the central bank's operations; and

[46] "QFAs should be a matter of concern for macroeconomic policy and structural adjustment for several reasons. First and foremost, in many countries such operations have given rise to losses (or diminished profits) by the central bank or other PFIs that have been sufficiently large to be an important contributor to monetary expansion. Indeed, there are cases in which the appearance of fiscal discipline in the central government accounts is belied by "indiscipline" in the financial sector that arises from banking institutions carrying out QFAs at the behest of the government.", Mackenzie and Peter (1996)

[47] Also, a broad interpretation of supporting sustainable development could "take central banks close to being the fiscal authority and cannot be squared with any mainstream ideas of central bank competencies in democracies" see Tucker (2018).

- Implementing the measures through separate legal structures, independent from the central bank's balance sheet.

(iii) Advisor to Government

39. Organic laws typically assign an advisory function to the central bank. With the aim of enabling cooperation and coordination on issues relevant to the government and the central bank, and to assist in the achievement of the latter's objectives, legal frameworks usually include an advisory role for the central bank as a function. The legal formulation for this responsibility may take different forms, but it commonly indicates that the central bank will "act as advisor to the Federal government on economic and, particularly, financial issues" (Article 3, Banco de Mexico Act). Similarly, Section 45 (b) of the Bank of Zambia Act provides that the Bank shall "through the Minister act as financial adviser to the Government and render advice and furnish reports on matters relating to the functions of the Bank and on other matters likely to affect such functions". Finally, the Reserve Bank of New Zealand has focused in enhancing transparency and reducing market failures such as information asymmetry.[48]

40. The particularities of risks posed by climate related events offer central banks a different perspective that other relevant players and policymakers cannot necessarily adopt, given their respective interests. While the government, in line with their commitments under the Agreement, delineates and implements the national contributions to the global response to climate change, it might resort to the particular expertise of different economic actors, including the central bank. In particular, such advising and coordinating role would require taking into account concomitantly three dimensions to climate change and financial stability: the "risk", "time horizon" and "system resilience" approaches, with the aim of supporting and complementing the governmental efforts.[49] In that light, the central bank would typically be well placed to provide technical advice on its areas of expertise (see also section IV). Moreover, given that these activities would be limited to a consultative role (e.g., without exposing the central bank's balance sheet), executing this function would not raise controversies, from a legal standpoint.

41. Many central banks, in line with their legal mandate, have contributed to the understanding of the impact of climate change in the economic policy. As long as climate initiatives are related with their areas of expertise, without exceeding the constraints established in their legal framework, central banks are well placed to facilitate collective contributions and to offer information and analysis.[50] For instance, the German Ministries of Finance and of the Environment, established in 2019 a Sustainable Financial Advisory Committee that aims to develop a strategy and proposals on how to enhance Germany's role as a sustainable finance location, with the participation of the Deutsche Bundesbank and BaFin, as observers. This cooperation is separate from the Financial Stability Committee and illustrates the difference from macroprudential policy on the one hand and a broader setting for macro-economic developments. Also, the Bank of England listed criteria guiding the rebalancing of its corporate bond purchase scheme (e.g., including to incentivize companies to take decisive action to achieve net zero). Furthermore, central banks have actively contributed to the enhancement of the climate change information architecture, in particular by identifying data gaps and supporting sustainable

[48] Reserve Bank of New Zealand (2021).

[49] Bolton et al. (2020).

[50] However, these contributions should be distinguished from the role assigned to central banks in macroprudential arrangements (see section III A above).

taxonomies.[51] Another example is De Nederlandsche Bank (DNB) that has argued that while the Covid pandemic leaves deep scars in the global economy, this offers "an excellent opportunity to accelerate the transition to a climate-neutral economy and combine it with economically sustainable or "green" recovery." DNB added that Governments need to take the first step, while central banks can play a supporting role.[52] Finally, the 2021 Bank of Canada Financial System Review summarized research that combined data on regional exposure to climate-related natural disasters with data on the geographic distribution of household financial vulnerabilities. The Bank of Canada also worked with OSFI and six Canadian financial institutions to complete a pilot project that used climate scenarios to assess transition risks. The project helped the financial sector (i) increase its understanding of the potential exposure to climate transition risks, (ii) improve its assessment and disclosure of climate-related risks, and (iii) build the capability to conduct climate scenario analysis.

(iv) Official Foreign Reserves Management

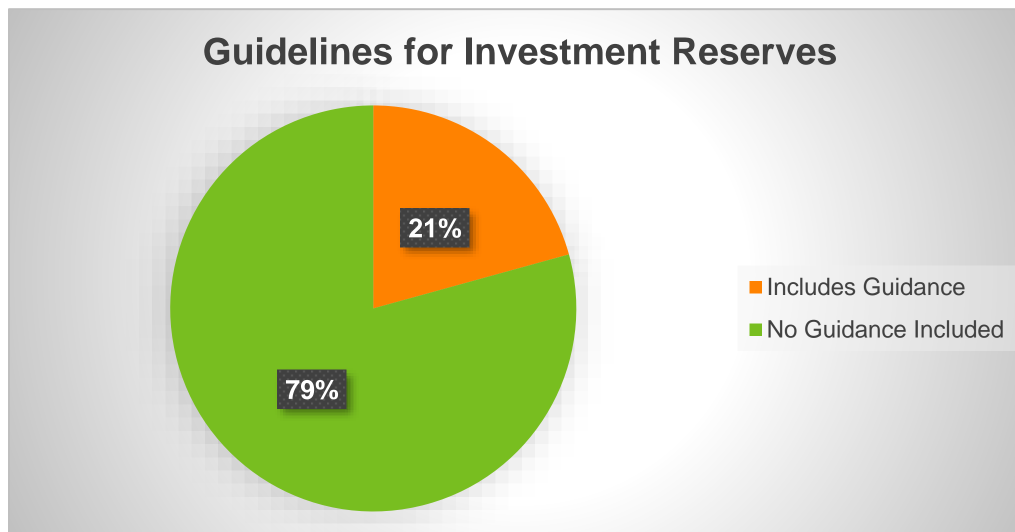
42. It is best practice for central banks' investment policies of the country's Official Foreign Reserves (OFR) to ensure that they are maintained at an adequate level. Typically, central bank organic laws (a) list the assets that could be considered as part of the OFR, including monetary gold, the Reserve Tranche with the IMF, SDR holdings, foreign currency, and deposits, and claims on monetary authorities and (b) indicate a framework for the operations that central banks can enter into. Central bank laws also often provide the policy objective that the central bank should pursue while holding and managing the official reserves (e.g., Article 18 Banco de Mexico Act). It is best practice for the central bank to hold the OFR assets so that they are readily available for the purpose of: (i) meeting balance of payments financing needs, (ii) intervening in the exchange markets to affect the currency exchange rate, and (iii) for other related purposes (e.g., maintaining confidence in the currency and the economy). In addition, to fulfil its objective, reserve assets should represent a claim on a non-resident, to which the monetary authorities have access *on demand*.[53] In this respect, a minority of central bank laws (21 percent) provide general guidelines which the central bank should take into account while determining the specific investment strategy (See Figure 3). For example, Article 137 of the Law on the Central Bank of Ecuador (COMYF) provides that the Central Bank of Ecuador will invest the international reserves in assets that "prioritize security, liquidity and profitability in this order". Similarly, Article 52.2 of the Central Bank of Armenia Law lists the security and liquidity of the allocated resources as the primary criteria. Note that sustainability is not as such one of the explicit investment guidelines. As these are mostly more recent central bank laws, the inclusion of such guidelines in the central bank law can be considered an emerging international best practice.

[51] For example, see the NGFS workstream on bridging the data gaps.

[52] De Nederlandsche Bank (2020).

[53] IMF (2009).

Figure 3



Based on an analysis by IMF staff of 169 legal frameworks for central banks including monetary unions. Given the diversity of legal formulations among members the analysis is necessarily general and stylized. IMF staff defer to members' authorities as to their interpretation of their own legal frameworks.

43. Central banks are increasingly adopting sustainable and responsible investment (SRI) practices in managing their portfolios. Central banks are facing mounting pressure to lead by an example and adopt sustainable and responsible investment practices into the management of their portfolios.[54] In this light, considering reputational risks and the need to set a good example, various central banks have adopted SRIs for their portfolios. For instance, in 2019 the Executive Board of the Swedish Riksbank decided to take account of sustainability in its choice of assets. This applies under the assumption that it does not negatively affect the Riksbank's preparedness, for example, where contingency requirements mean that the foreign currency reserves must largely consist of government bonds in US dollars. The Riksbank has primarily chosen to consider the climate impact entailed by the assets in the foreign currency reserves. This has had the consequence that the Riksbank only invests in Australian states and Canadian provinces with the same or lower greenhouse gas intensities than the country as a whole. Consequently, in 2019, the Riksbank sold bonds issued by some Australian states and Canadian provinces and invested in government bonds and other states and provinces with lower greenhouse gas intensities. In a similar vein, DNB, in its Responsible Investment Charter, underscored its stance on Corporate Social Responsibility (CSR) and the adoption of the CSR Charter and signature of the Principles for Responsible Investments (PRI).[55] In particular, DNB will screen the investment universe and its potential counterparties on ESG criteria, and will promote green finance and responsible investing. Another example can be found in the Banco Central do Brasil's new sustainability agenda that explicitly indicates the inclusion of sustainability criteria for the selection of counterparties in the management of international reserves and for investment decisions.[56] In this respect it is noted that foreign exchange reserves are not always qualified as official foreign reserves, but in various jurisdictions some portions are allocated to sovereign wealth funds (SWF) with a mandate to invest these assets so as to generate sustainable returns for future generations. Some SWFs are managed by central banks, and the point

[54] NGFS (2019a).

[55] UNPRI (2006). The PRI are voluntary set of investment principles that outline actions to incorporate ESG considerations into investment practices.

[56] Central Bank of Brazil (as reviewed in July 2024.). Similarly, Sveriges Riksbank (2020).

has been made that "Decisions by the larger SWFs, such as Norway's could be more important for their leadership signal than anything the central bank might otherwise do with its domestic balance sheet".[57]

44. Climate considerations could be integrated into central banks OFR management strategy. Theoretically, integrating climate related concerns could be achieved implicitly and/or explicitly. *Implicit* integration involves introducing SRI into the standing policy objectives of the foreign exchange reserves. Thus, this entails recognizing the indirect ways in which climate policies could jeopardize the central banks' fulfilment of the existing policy objectives for controlling the OFR and therefore the fulfillment of its core duties. *Explicit* integration could be achieved if the central banks' legal framework specifically includes climate change mitigation, adaptation, and transition considerations as one of the objectives for holding and managing the OFR. In practice, this would imply changing the central bank's legal framework, with the potential political constraint, raising questions whether it is appropriate to assign explicit sustainability objectives in the broader policymaking context.[58]

45. Trade-offs could emerge when including an additional sustainability objective to the current purpose and investment criteria. The balance among several investment criteria - liquidity, safety, and return - that central banks should take into account in the design of their investment strategies, will also warrant further analysis to accommodate the new objective, potentially exacerbating the complexities that management of the OFR *per se* entails. In addition, given the difficulty of pursuing all the mentioned objectives jointly, accountability could also be diluted. While there appears to be room to include sustainability considerations in the investment of the official foreign reserves, this should not impair the central bank's ability to pursue its core price and financial stability objectives. Therefore, the inclusion of an addition sustainability objective would have to be crafted as a subsidiary objective which should not affect the ability of the central bank to use the official foreign reserves for their intended public policy purposes. Along a similar vein recall the aforementioned decision by the Swedish Riksbank to take account of sustainability in its choice of assets applies under the assumption that this does not negatively affect the Riksbank's preparedness to use the official reserves (see paragraph 43). It is interesting to note that BIS research exploring how well a sustainability objective might coexist with the classical triad has noted that "sustainability objectives can be integrated into reserve management frameworks without forgoing safety and return".[59] Even so, note that research did not (so far) find evidence that the integration of sustainability into the investment of OFR can ensure the necessary liquidity of official reserves. In that context, central banks should evaluate their investment strategies and balance the potential trade-offs, within the constraints of their legal framework.

IV. Institutional Arrangements and Climate Change

Central bank laws establish institutional arrangements to ensure autonomous and high-quality decision-making. Central banks' high standard of expertise, well established decision-making framework and accountability

[57] Fischer and Kern (2019). In this respect, note that in 2022 the Norwegian Ministry of Finance updated the mandate of Norges Bank's management of the Government Pension Fund Global. Norges Bank already sets great store by being a responsible investor. From 2022 the Bank's responsible investment is now to be based "on the long-term goal that the companies we invest in align their activities with global net zero emissions in accordance with the Paris Agreement" ; Bache (2023)

[58] Fender et al (2019).

[59] *Ibid.*

arrangement are the essential elements to legitimize the autonomous institution to conduct states' powers. This section presents an analysis on the interaction between central banks' institutional arrangements and climate related policies.

46. Central banks' actions to support climate policies could raise questions regarding the boundaries between the realm of central bank autonomous decision-making and political decision-making. Although there is wide support for central banks to integrate climate considerations into their policy and actions, there are controversies on whether and how central banks can assume actions tailored to support climate policies and the constraints of such actions. Regarding the response to climate change and who should be responsible, several questions remain, for instance, "How hard should government, business and society allocate resources to reducing climate change? What measures need to be taken, and what behavior should be encouraged or punished?"[60]

(i) Decision-Making Structures

47. To better legitimize its judgement and its contributions to support climate policies, central banks should develop, within their legal mandate, expertise on relevant climate change issues. Given the uncertainties of climate change, decision-making could be perceived as a matter of trade-offs between social values. In line with the commitments established under the Agreement, governments undertake and communicate their national contributions to the global response to climate change. However, in considering the impact of climate in the economy, and to safeguard the central bank's balance sheet that could be impacted by physical and transition climate risks, a central bank's decision-making bodies should ensure that the central bank has sufficient expertise, and analytical framework (economic modelling) to incorporate climate issues into economic and financial assessments and ample data to adequately assess climate considerations while determining its policies and operations (e.g., listing eligible assets for outright or repo transactions, as well as eligible securities for monetary operations).[61] The more a central bank can address climate through a robust economic framework, the more the central bank can be accountable for its policy.

48. Conceptually, as long as climate issues can be captured through the lens of risks to price or financial stability, central banks, within their current mandate, are well placed for assessing such risks and take measures using tools currently at their hands. Central banks, considering national methods of legal interpretation of their current institutional framework, have adopted different stances regarding climate change policies. If decision-making bodies of the central banks were to adopt measures to support climate policies, such as setting incentives to de-carbonize the economy ("go green"), in particular determining the target and pace of actions, this could differ from technical judgement. In particular, if the decisions are not rigorously linked with their assigned responsibilities and the technical analysis in the areas of expertise of the central bank, it raises questions on whether the latter has sufficient legal basis to make those determinations within its institutional arrangements (e.g., autonomous regime) and thus runs the risks of (i) stepping on the governmental functions, or (ii) political bodies intervening into the central bank's policy decision-making. Those decisions adopted could expose the central bank to reputational, legal, and political risks and potentially undermine its credibility.

49. The need to coordinate measure to achieve climate change-related objectives with those aimed at other objectives of the central bank can put pressure on the capacity of their decision-making

[60] Weidmann (2019).

[61] Schoenmaker (2019).

structures. Climate change impacts on many different aspects of central bank objectives and functions. Central banks therefore need to have decision-making structures in place that are able to adequately identify, assess, and manage these risks and trade-offs. In case a central bank law tasks multiple bodies such as an oversight board, Monetary Policy Committee (MPC) and Financial Policy Committee (FPC) for decision-making, these bodies need to coordinate when addressing climate issues to ensure an effective, consistent, and sound policy formulation. For example, the Bank of England's MPC and FPC coordination on these complex issues is enabled at a level of decision-making committees (see Box 6). These committees' mandates may very well overlap and thus, there is a need for the Board to ensure the coordination between them and ascertain that the central bank operates within its legal boundaries, it is financially and operationally sound, utilizes its financial resources effectively and efficiently, and is transparent and accountable for its decisions.[62] For example, in determining the "eligible collateral criteria" the oversight function (responsible for the central bank's risk management) may set collateral criteria based on financial risk of climate change to the central bank's balance sheet. This will have an impact on MPC decisions as eligible collateral is critical to the availability of monetary operations and emergency lending assistance. It will also affect FPC issues as central bank's eligible collateral criteria are also commonly seen by financial institutions as guidance for their own risk management, hence establishing eligibility criteria for collateral used in the financial sector.

Box 6. Bank of England: Coordination MPC and FPC[1]

The Bank of England's MPC and FPC have distinct primary objectives; it is monetary stability for the MPC and financial stability for the FPC. However, these committees share a secondary objective, namely support to the Government's objectives for growth and employment (note that the Chancellor has clarified in the remits of both committees that environmental policies are part of the Government's relevant policies).

The policies adopted by one committee may affect the economic and financial variables relevant to the other. As a result, the Bank of England has put in place detailed mechanisms to ensure effective coordination between the work of the MPC and the FPC. First, the Governor chairs both committees. In addition, the Bank of England's Deputy Governors also participate in these committees (in addition to different independent members in the committees). Their presence, as well as the various briefing, discussion and drafting meetings of both committees contribute to internal coordination.

Furthermore, the members of both committees have full access to all relevant information and can attend each other's staff briefing meetings. The committee members receive briefings on the impact of the other committee's policies on their own policy objectives and the committees have joint briefing sessions on topics of common interest to them (the analysis of topics of common interest is produced jointly by Bank of England staff).

Mutual understanding is facilitated by the committees identifying key policy issues and making clear how they intend to respond when shocks hit the economy or financial system. Finally, the Chancellor's letter of 2020 on the remit of the FPC stresses that the FPC and the MPC "should continue to have regard to each other's actions, to enhance coordination between monetary and macroprudential policy".

[1] Shakir and Tong (2014).

50. In addition, from a governance perspective, there is a need for the coordination of overall climate-related policy at the decision-making level of the central bank. Typically, management enjoys more flexibility to keep abreast of the issues, whereas oversight boards are responsible for determining the internal governance structure of a central bank. Similar to the increasing role of central banks in dealing with Fintech issues, the cross-departmental and complex nature of climate-related issues requires the central

[62] Bossu and Rossi (2019).

bank's oversight board to consider the most appropriate structure to coordinate its climate-related policies and to manage the potential trade-offs, so as to allow the effective design and implementation of these policies in a legally sound and autonomous manner.[63] Setting up a dedicated unit and assigning executive directors to coordinate climate related issues could be an option. For instance, the DNB has a Sustainable Finance Office (SFO) that aim to facilitate the dialogue and engagement with external third parties on sustainability. Another example can be found in the ECB that has established a climate change center to bring together the work on climate issues in different parts of the central bank and report to the ECB's President, who oversees the ECB's work on climate change and sustainable finance. The climate change center shapes and steers the ECB's climate agenda internally and externally, building on the expertise of all business areas working on climate related topics. It plays a vital role in monitoring progress of climate actions across the ECB and keeping the work on track. Its activities are organized along a number of workstreams, ranging from monetary policy to prudential functions, and supported by staff that have data and climate change expertise.[64]

51. External experts can support central banks in the implementation of their policies, particularly with regard to SRI approaches. For instance, the Swiss National Bank (SNB) employs ESG criteria in the management of its equity portfolio through via a selective exclusion policy. With regard to the environment, human rights, and internationally condemned weapons, the SNB regularly evaluates its investments in a two-stage process by external firms. The final decision on whether or not to exclude a company is made by the SNB itself.

(ii) Autonomy

52. Climate change does not seem to alter the legal foundations of its autonomy; however, it can expose weaknesses. For instance, if the government were to undertake an ambitious climate transition agenda, this could translate into pressure on the central bank to support that agenda through its monetary policy operations, exposing its balance sheet. This could be particularly sensitive when legislative safeguards are absent.

53. When central banks take guidance on climate change from the government, the scope and procedure for the guidance should be clearly founded in the law. Central banks do not enjoy the same or equivalent levels of autonomy for all their functions. While it is recognized that the execution of monetary policy function deserves the highest possible level of autonomy, other functions, such as fiscal agent and implementation of exchange control frameworks can be executed with much lower levels. In such cases, central bank's legal frameworks could allow the involvement of the government, either through instructions or co-decision-making. For instance, the Reserve Bank of New Zealand Act, which aims to strengthen governance and accountability for monetary and financial stability frameworks. One of the reforms is to introduce a Financial Policy Remit, issued by the Minister of Finance. According to the policy note issued by the government, "remit could include, that the Board have regard to climate change risks when pursuing the financial stability objective. The empowering provisions for the Remit would be designed to provide a balance between protecting the Bank's operational autonomy and providing an appropriate level of democratic influence over the very significant policy making functions that Parliament has delegated to the Bank in relation to financial stability." Although such a procedure may work well for certain countries where central banks have

[63] Bechara *et al* (2021).

[64] The five work streams of the climate change center focus on: 1) financial stability and prudential policy; 2) macroeconomic analysis and monetary policy; 3) financial market operations and risk; 4) EU policy and financial regulation; and 5) corporate sustainability. See ECB (2021b).

strong governance arrangements, it may potentially undermine the central bank's autonomous decision-making if the central bank law does clearly define the scope of the remit.

54. Adopting a "green" taxonomy, preferably set by politically accountable bodies with a sound scientific basis, could serve as an effective way to anchor climate related decisions, thereby providing cover for central bank decisions in using (or not) specific assets in the implementation of their objectives. When central banks purchase assets, take collateral, or assess risk of assets held by financial institutions, they should ground their decisions in transparent criteria. It is difficult to conclude that defining what consists of "green" or "brown" assets can be derived solely from the central bank's pure economic expertise. Moreover, it appears challenging to conclude that "green" assets necessarily entail less risks than brown assets. As the incorporation of a climate risk aspect in their actions would also act as an example and could influence the market, central banks would ideally rely on a taxonomy ideally defined by politically accountable bodies that could help anchor their decisions in sound scientific premises and buttress their legitimacy, and mitigate reputational, legal, and political risks. Furthermore, the role of central banks in developing the taxonomy should be carefully assessed.[65] Several efforts are being undertaken to develop harmonized taxonomies that are expected to allow measuring risks and financial flows; in addition, it would help consistency, strengthen comparability, underpin effective disclosure to the market,[66] and prevent 'greenwashing'.[67]

55. Carefully designed inter-agency committees can be a forum to coordinate climate policies among government agencies and an autonomous central bank. Central banks may need to coordinate with other financial supervisors and regulators, as well as government when determining their approach regarding climate change. It could be discussed in a Macroprudential Committee or central banks could participate in a more focused "climate committee" which can be seen in New Zealand (see the discussions on financial stability and advisor to the government, in section III). In case inter-agency committees are established, it is important to have an institutional arrangement that ensures that each individual agency's role is consistent with their respective legal mandate, while taking into account the autonomy provided to the agencies. While MoUs can provide an important basis for enhancing coordination, they must be supported by (and cannot be substituted for) underlying legislation that provides the basis for inter-agency policy coordination.

(iii) Transparency and Accountability

56. As the role of central banks becomes broader and further incorporates climate issues, central banks' legal frameworks will need to be more transparent. The IMF's new Central Bank Transparency Code includes principles on, *inter alia*, the disclosure of central banks' principal risks and their overall risk strategy (principle 1.5), the disclosure of monetary policy operational frameworks (principle 3.1.1), and the outcome of the implementation of these frameworks (principle 4.4).[68] The implementation of these principles will increase transparency and would support enhancing higher scrutiny and inputs from financial industry,

[65] In some jurisdictions the central bank has acted as a catalyzer for an industry-led initiative (Singapore) or contributed on the work led by other governmental entities (EU), while others have defined a taxonomy with broad principles and criteria to facilitate the assessment and classification of assets by financial institutions (Bangladesh).

[66] EU High-Level Expert Group (2018).

[67] The issue of taxonomies is developed in more detail in a parallel working paper, see Tamez et al. (2024).

[68] IMF (2020).

academics, and NGOs. More transparency and accountability are required to maintain public support, safeguard independence, and enhance policy effectiveness.

57. Central banks should be transparent and accountable for their decisions. This seems to be of particular relevance when accepting or using specific assets as part of their monetary policy operations (or indeed investment decisions), in the pursuit of its assigned objectives. Taking due account of the limited number of "green" issuers currently accessible and the scope of the "green" bond market, any central bank operations focusing on specific assets could be perceived as a signal and could be an opportunity to influence markets that could follow the central bank's example. However, a question arises on whether the necessary tools (e.g., data, methodologies, resources, and expertise) are currently available for a central bank to select the appropriate "green" assets. As indicated before, one way of preventing the central bank from adopting a potentially political (or non-economic) decision, while enhancing transparency and accountability, and strengthening legitimacy—is to use "taxonomies" set by the governments and adequately grounded in sound scientific basis. In any case, the central bank should remain accountable for their actions, and be transparent about such decisions. In addition, central banks should consider mechanisms to enhance procedural safeguards and to enable public scrutiny, such as developing *ex ante* guidance, due process, and public consultation with stakeholders. Central banks could also explore adopting mission statements, or similar documents (see paragraph 12).

58. Central banks' contributions to climate policies will also need to remain subject to their accountability framework. Central banks are tasked with public functions and conduct its policy autonomously. To balance such autonomy, central banks are accountable to political bodies (e.g., legislatures) for their decisions. The legal mandate provides a framework to delineate the central banks actions and a benchmark to assess whether central banks fulfill their intended goals. Therefore, to prevent potential political and reputational risks as well as legal challenges,[69] central banks' support to climate policies should fit within their legal frameworks. In that context, it is foreseeable that even though central banks would aim to ground their support to climate policies on technical expertise, introducing measures tailored to pursue climate objectives raise questions. To preserve its autonomy in policy and operations, it will be important for central banks to have sound legal basis for their actions and enhance the public understanding of their role in climate change, by effectively explaining the rationale behind their actions, as well as their limitations, based on its statutory mandate. In this regard, issuing a mission statement to clarify a central bank's understanding of its legal mandate, complemented with a well-designed communication strategy, could be useful to enhance central bank's accountability and transparency. Interaction with political bodies and more generally with the public will help central banks to formulate its stance to climate change and enhance the legitimacy of their actions.

[69] The NGFS Legal Task Force conducted a survey amongst members to gather information from the respective jurisdictions about climate related litigation, regarding the measures taken and anticipated to assess, manage, and mitigate climate related litigation risk. 50 percent of the survey respondents reported that they have taken first steps to address these risks, but 22 percent explicitly said that no such measures had been implemented. Furthermore, the actions include general steps, include gathering a better understanding of climate change related risks relevant to their mandates and operations; providing climate related data and information; integrating these risks in central banks' own portfolios and/or into the broader risk management framework; and contributing to the development of taxonomies. Many respondents also reported that they had published guides and/or established working groups, specific units, or started public consultations. Some also indicated their intention to do more in the future. See Network for Greening the Financial System (2021).

V. Conclusions

59. The actions adopted by central banks regarding climate policies must be consistent with their legal frameworks. Central banks' organic laws provide a mandate by delegating specific sovereign tasks. This determines the legal framework and limits to the central banks' operations. The organic laws also establish tailored autonomy and accountability frameworks for central banks. Thus, statutory mandates that clearly establish a hierarchy when multiple and potentially conflicting objectives are assigned -providing primacy of the price and financial stability objectives- is essential to ensure legitimacy and legal certainty when the central bank actions observe the parameters established by law. In addition, it should be recognized that the primary responsibility to contribute to the response to climate change and reduce its impact rests with government. In any case, even when pressure to act has intensified, central banks should not overstep in the realm of politically accountable bodies, nor exceed their mandate. It is increasingly recognized that when climate change has a bearing in the central banks' core objectives, i.e., -price and financial stability, in the pursuit of such goals within their legal frameworks central banks are mandated to adopt measures to address the impact of climate risks. However, this does not necessarily establish a separate mandate to address climate change. Moreover, given the diverse legal constructions, and other institutional arrangements, each central bank's approach to climate change may differ.

60. While the scope of central banks' contributions to the response to climate change is evolving, subject to national methods of interpretation of their legal frameworks, central banks could adopt a number of actions within their existing mandates that, from a legal standpoint, will be uncontroversial. For instance, central banks have supported governments in designing climate change policies while providing sound technical advice to the government in the areas that fall within their expertise and undertaken efforts to raise awareness of financial firms' exposure to climate risks. Central banks could also collect and analyze data to adequately assess climate for statistical reasons. In addition, central banks could incorporate climate concerns into their monetary and macroprudential modelling and analysis, with the aim of assessing the impact of climate change on price and financial stability. Such evaluations should usefully inform the central bank's decision-making and support the design of policies to adequately respond to the potential shocks, and fulfill the mandate assigned to the central bank. In particular, exercising their fiduciary responsibility for central banks' financial soundness, central bank decision makers could incorporate the evaluation of potential material climate risks into their monetary policy frameworks for eligible assets, collateral, and risk management frameworks, when climate change could affect the value and risk profile of the assets on the central bank's balance sheet. Further, central banks, acting within their statutory limits, could provide limited exceptional monetary financing to alleviate the temporary effects of specific, unforeseen weather events, without prejudice to the objective of price stability and public debt levels.

61. However, assuming other actions to pursue a climate change objective could expose central banks to political, reputational, and legal risks. This paper recognizes that central banks have adopted different approaches regarding climate change. For the avoidance of any doubts, as each jurisdiction should interpret its central bank's legal framework, this paper does not express an opinion on whether any of the central banks surveyed has exceeded its mandate or powers. With this caveat, actions such as providing credit to the government to finance the governmental response to the long-term horizon events that climate change entails, or supporting governmental economic policies that could undermine the price or financial stability objectives, create vulnerabilities. Furthermore, entering into monetary operations to favor a specific sector, or assets creating market distributional effects (unless the principles of proportionality, objectivity and non-discrimination are complied with), designing credit policies to promote structural policies (green economy)

departing from financial stability, or investing official foreign reserves to pursue sustainability objectives without considering their liquidity or safety, would also be controversial as it may deviate from the statutory mandate of central banks. Finally, exceeding the constraints established in the current legal regime could be deemed as overstepping into the realm of politically accountable bodies. This would expose the central bank to legal challenges, as well reputational risks, hindering its credibility and complicating the achievement of its assigned policy objective—namely price and financial stability, and diluting the responsibility of politically accountable authorities and exposing the central bank to attempts to curtail its autonomy.

62. If additional tasks are assigned to the central bank, decision-making and accountability and transparency frameworks will need to be adjusted to balance the central bank's autonomy. The current central bank institutional arrangements (i.e., autonomy and accountability) are designed for the pursuit of the specific policy objectives of achieving price and financial stability. Current procedural safeguards and transparency are relevant to achieve the central bank's assigned mandate and to support public scrutiny, which enhance the legitimacy of its actions. If politically accountable bodies decide to legally allocate additional responsibilities to the central bank to contribute to the response to climate change, departing from its core objectives of price and financial stability, government intervention will likely become inevitable, and adequate safeguards should be established to shield the needed central banks' personal, institutional, operational and financial autonomy to achieve its current mandate. However, assigning climate related objectives to the central bank will entail difficult and sensitive trade-offs between different policies, with potential market distributional effects. To mitigate the potential legal, political, and reputational risks, there should be (i) a clear delineation of responsibilities between central banks and governments, in particular when central banks' actions reflect political decisions, combined with (ii) an effort to enhance the public understanding.

Central Banks and Climate Change —Key Considerations Table

		Paragraph
1.	A clear and well-defined legal mandate plays a critical role in delineating the contours of a central bank's permitted actions and helps prevents potential legal, political, and reputational risks as well as legal challenges. Central banks' support to climate policies and its actions to address the impact of climate change, should fit within their legal framework.	#11, 22, 33 and 58
2.	Climate change -as well as other macroeconomic developments- could have impact in the central bank's mandate and therefore it is in the pursuit of its price and financial stability objectives that central banks should integrate the impact of climate change.	#15 and 22
3.	If politically accountable bodies (e.g., the legislature) want the central bank to pursue climate objectives, this would best be included in an explicit legal reference to (sustainable) environmental policy in its (subsidiary) objective(s). However, (i) the primary political responsibility for addressing the climate risks rest and should remain with the government; (ii) if not well designed, the decisions adopted could create market distortionary effects, and (iii) charging the central bank with such tasks would involve difficult and sensitive trade-offs between different policies and the distinction between monetary policy and fiscal policy remains important.	#25 and 30
4.	Jurisdictions should assess (under national methods of legal interpretation) the extent to which legal formulations that include economic or development policies could extend to climate matters, and whether it could serve as legal basis for specific measures to support the government's contributions to the response to climate change, with the caveat that this should fit (i) within the hierarchy of the central bank's objectives, (ii) its functions and powers, and (iii) be limited as the primary responsibility for the pursuit of environmental policies resides with the government.	#29
5.	Given that climate change could affect the value and risk profile of the assets on the central bank's balance sheet, to fulfill their duties decision-making bodies should evaluate these potential material risks when the eligibility of assets is determined for use as collateral and as part of asset purchase programs for monetary policy purposes. However, insofar as central banks would do so with a view to pursuing specific goals (e.g., climate policies), this would have to fit in its legal regime, and central banks should be careful that such decisions do not impair monetary policy effectiveness and reduce the central bank's ability to achieve its mandated objectives.	#33
6.	While maintaining the strict control of monetary financing, provisions allowing temporary monetary financing in the event of unforeseen natural disasters could be a useful inclusion in central bank laws, subject to robust safeguards (this should not be confused with monetary finance to climate policies).	#36 and 37
7.	When central bank's assets are used in exceptional circumstances for objectives that depart from monetary and financial stability objectives, additional safeguards to increase the	#38

	transparency and accountability should be established and appropriate legal design features to mitigate risks should be introduced.	
8.	While integrating climate considerations into their OFR management strategy, central banks should carefully assess whether the liquidity, safety and return of the invested OFR remain unimpaired.	#45
9.	Central bank's decision-making bodies should ensure that the central bank has sufficient expertise to incorporate climate issues into economic and financial assessments and ample data to adequately assess climate considerations while determining its policies and operations.	#47
10.	To ensure an effective, consistent, and sound policy formulation, central bank's bodies (e.g., oversight board, MPC and FPC) should ensure adequate coordination mechanism to incorporate climate issues in their policy decisions.	#49 and 50
11.	When central banks take guidance on climate change from the government, the scope and procedure for the guidance should be clearly founded in law.	#53
12.	Adopting a "green" taxonomy -preferably set by politically accountable bodies with sound scientific basis- could serve as an effective way to anchor climate related decisions in sensitive issues (e.g., purchase assets, or accept collateral) and the role of the central bank in developing the "green" taxonomy should be assessed.	#54
13.	Carefully designed inter-agency committees can assist in the coordination on climate policies among government agencies and an autonomous central bank.	#55
14.	Central banks should remain transparent and accountable for their decisions, and as the role of central banks becomes broader and further incorporates climate issues, central banks' legal frameworks will need to be more transparent.	#56, 57 and 58
15.	Central banks should consider mechanisms to enhance procedural safeguards and to enable public scrutiny, such as developing *ex ante* guidance, due process, and public consultation with stakeholders of envisaged measures.	#57
16.	To preserve its autonomy in policy and operations, central banks should have sound legal basis for their actions.	#58
17.	To enhance the accountability, transparency, and public understanding of their role in climate change, central banks could evaluate explaining the rationale behind their actions, as well as their limitations, based on its statutory mandate (e.g., issuing a mission statement or similar document to clarify a central bank's understanding of its legal mandate).	#58

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