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School of Social Science and Public Policy
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Module Title:	**Political Economy of Financial Crises**
Module Code: (e.g. 5AAOB000)	**7AAON223**

Assignment: (may be abbreviated)	3000-word academic essay
Assignment tutor/group:	na
Deadline:	10/05/2024
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Word Count:	3141

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10. What are the key debates regarding the role of central banks in addressing climate change and supporting the transition to a low-carbon economy? How are central banks currently responding to climate change?

Introduction

With the 2015 Paris Agreement, most countries of the world have agreed to hold the increase in global average temperature to below 2◦C above pre-industrial levels. Despite possessing the knowledge and the recipes for the solutions, policymakers have so far struggled to implement necessary measures. Among these measures there is the "greening" of finance: the Paris Agreement recommends making flows of money consistent with a pathway towards low emissions and climate-resilient development. It is in this context that growing calls have arisen for central banks, the guarantors of price and financial stability, to step in and join the effort. Amidst the mounting threat of climate change, "continuing to focus on financial stability is akin to re-arranging tables on the deck of the Titanic" (Demekas&Grippa, 2023, *p.222*), some have argued. Yet, for central banks that may not end up as easy as it seems, as it could have unintended consequences and it, most importantly, it could clash with their current mandates. The aim of this essay is thus to examine the debates regarding central banks taking a more promotional role in the fight against climate change.

To this end, this essay is divided in 5 sections. The first section identifies the links between climate change and the financial system. The second clarifies the tools at central banks' disposal, distinguishing between *informational* and *promotional* instruments. The third section analyses, qualitatively, the pros and cons of promotional instruments, emphasising the potential drawbacks. In the fourth section the normative debate is addressed, that is whether central banks *should* be more proactive. Finally, the last part presents a brief case study of the European Central Bank (ECB), exploring its green turn and one potential way forward. As primary sources, excerpts from public speeches of central bank officials are employed. This decision is supported by central bankers' recognition of the importance of communication as a proactive tool for influencing agents' perceptions, as testified by their "forward guidance".

Climate change and the financial system

In a landmark speech in 2015, former Governor of the Bank of England Mark Carney was the first one to publicly identify the channels through which climate change affects financial stability. He identified three risks: *physical risks*, derived from damages incurred in climate and weather events; *transition risks,* arising from changes in government policies; and *liability risks*, arising from the costs of potential climate-related litigation (Carney, 2015). Financial institutions are directly impacted in two ways: firstly, they are susceptible to defaults on loan portfolios and declining asset values due to climate-related damages, and secondly, they face exposure to "stranded assets" originating from business models incompatible with a shift towards a low-carbon economy (IMF, 2019). Additionally, these effects can indirectly spread and jeopardise the entire financial system. Bolton et al. (2020) have labelled the unpredictability and severity of extreme climate-related events as "green swans". Deep uncertainty in financial markets may also complicate central banks' pursuit of price stability, distorting the transmission of monetary policy signals (NGFS, 2020).

In the words of Carney, "*an old adage is that which is measured can be managed*" (Carney, 2015). If investors perfectly priced all the risks climate change entails, there would probably be no concerns for financial markets. But the problem is exactly that climate risks continue to be mispriced (Schnabel, 2020). Mispricing, on the one hand, stems from the lack of consistent and transparent criteria to gauge the extent to which companies are "green" or are following emission-reduction pathways. Such absence creates informational market failures (ibid.). Notably, it is not for the lack of trying: despite the vast array of ESG standards invading markets, and the numerous taxonomies drafted to classify what counts as green, informational tools have not been consistent and have often been subjected to accusations of "greenwashing". On the other hand, traditional modelling tools are ill-suited to account for the long-term horizon and the potentially catastrophic consequences related to climate change, making it challenging, if even possible, to accurately price all the risks (Demekas&Grippa, 2022).

Yet, it is not only about how the climate impacts price and financial stability, but also how finance could spur the sustainable investments desperately needed for a faster transition. In the absence of a global price of carbon and given the insufficient ambition shown by politicians, "*which is measured"*, if measurable at all, is not likely to be enough (Schnabel, 2020). And finance, in this context, could play a more "market-shaping" role (Mazzuccato, 2016), reorienting money away from carbon-intensive firms and towards greener activities and technologies.

What central banks can do

As guarantors of price and financial stability, central banks must mitigate the risks highlighted above, and to that end, they have increasingly adopted a wide range of instruments. These include tools to incorporate climate-related risks in their macroeconomic models and stress tests to estimate the stability of the financial system (NGFS, 2021). These instruments stem from a prudential motive, aimed at ensuring the safety of the financial system (Baer et al., 2021). Central banks have also encouraged financial institutions to disclose the carbon intensity of their portfolios, and are helping to set standards and benchmarks for those disclosures to be uniform and transparent. Albeit prudential in nature, these informational initiatives can also be considered promotional, in the sense that they contribute to establishing a framework for the market to adjust more efficiently (ibid.).

Nevertheless, calls have grown louder for central banks to take on a more proactive role, with the aim of altering the incentives encountered by financial actors when they make investment choices. Several tools in the arsenal of central banks can serve this objective. Firstly, asset purchases under quantitative easing (QE) programs could be "tweaked" towards greener bonds, thereby decarbonising the central bank's balance sheet and generating a liquidity premium for low-carbon companies (Schoenmaker, 2021). Secondly, the list of eligible collaterals (the securities commercial banks provide when borrowing money from the central bank) could be modified to, for example, exclude credit lent to companies which do not report their emissions (Dafermos et al., 2021). Further, mandatory reserve requirements for commercial banks could be differentiated, rewarding banks which own green assets and/or penalising others which hold more carbon-

intensive portfolios (Cullen, 2023). Some have also suggested greening refinancing operations, proposing a lower interest rate for banks which lend to sustainable businesses (Klooster&Tilburg, 2020). All these incentive-based measures, in addressing obstacles to low-carbon incentives, serve a promotional motive.

There would also be policies to directly steer the flow of credit, rather than providing incentives to the market (Baer et al., 2021). However, these kinds of policies, which necessitate close political coordination with governmental authorities, would be the ones most encroaching on central bank's mandates. Western central banks were granted a significant level of independence to escape the discretion of politicians, part of a broader trend of delegation of powers to technical agencies tasked with making rules, not favouring specific entities (Majone, 1997). In many parts of the developing world, instead, central banks have long played a "developmental role", using their powers to target specific sectors of the economy prioritised by governments (Dikau&Ryan-Collins, 2018). China represents the most striking example. Until 2016, the People's Bank of China employed an informal credit policy guidance (named "window guidance") through which it persuaded banks to extend additional credit to specific sectors, among which renewables and energy efficiency (Dikau&Volz, 2023). With the shift towards a more market-based financial system, China has now adopted more incentive-based instruments, but the same logic is at play: banks' performances are assessed, among other criteria, based on the alignment of their portfolios to the central bank's green strategy (Zheng, 2018).

Greening central banks' policies: effective or damaging?

Before evaluating whether more promotional policies *should* be taken, and the ways in which they *could* be taken based on current mandates, it is worth exploring their effectiveness and their potential drawbacks.

I discussed above about the need to redirect financial flows towards greener sector in light of uncorrected price externalities. This is of the utmost importance for accelerating the transition. But there are other reasons for greening the central bank toolkit. One is the "carbon bias" inherent in monetary operations (Matikainen et al., 2017). Indeed, corporate bonds from the most carbon-intensive sectors (such as oil&gas, utilities, and manufacturing) represent a disproportionately large share of the total corporate bonds traded in financial markets relative to their contribution to the overall economy (ibid.). Such skewness is also manifested in corporate securities pledged as collaterals by commercial banks (Dafermos et al., 2021). Correcting this carbon bias would thus mean removing an implicit subsidy given to carbon-intensive firms. One other factor is the signalling effect that new policies have on market participants (Schoenmaker, 2021). When a central bank credibly commits to an instrument, generally, the effects are expected to be amplified.

Yet, in addition to mixed results from empirical evidence, there are some fundamental problems that must be considered. One is the so-called "Tinderberg Rule", which states that policy inconsistencies are bound to arise if the same instrument is used to pursue different objectives (Cullen, 2023). For instance, QE programs, originally implemented when interest rates were at the zero-lower-bound, are now being phased out. A protracted period of monetary tightening would thus be inconsistent with green asset purchases. The same

rule applies also for collaterals and capital requirements: their objectives are guarding the central bank and the commercial banks, respectively, against financial risks. Providing selective support for green assets may consequently lead to undesired reductions in the capital base. This brings me to one other important problem, which is the fact that incentive-based policies could have unintended effects (Demekas&Grippa, 2022). Irrational financial markets could be capable of anticipating such policies with distorting effects, potentially creating "green bubbles" (ibid.). Similarly, assets could be become stranded relatively quickly, creating widespread financial risks (Schoenmaker, 2021). Another issue stems from the lack of well-developed informational tools. Central banks cannot divest themselves of their carbon-intensive assets if they cannot distinguish between "the brown, not so brown, green, and very green" (Lagarde, 2020). The outlook is even more complicated for government bonds, which constitute the bulk of QE purchases (Cullen, 2023). Plus, simply selling the most carbon-intensive assets does not do justice to companies with credible reduction plans (Hauser, 2021).

Overall, all these problems do not reinforce the claim that central banks should idly stick to their prudential role, but they shed light on why (Western) central bankers have generally refrained so far from more aggressive promotional policies.

What central banks *should* do

Normative debates on the more proactive role central banks should play revolve around their core function and the legitimacy derived from their mandates. Generally, there two factions: conservatives and progressives.

Today, even the most reluctant officials recognise that climate change poses substantial risks for price stability and the financial system, and they envisage the need for central banks to understand them and to correct them with prudential measures (Dietsch et al., 2023). However, this is as far as they come. In their understanding, a central bank playing an active greening role would venture into the field of distributive politics, since it would entail picking winners (namely, green firms) (ibid.). Even putting a price on carbon, the market-based solution touted by economists, comes with a burden which can be socially divisive. In the words of Mersch, a former member of the ECB executive board, "*It is not up to the central bank but to elected governments to decide which industry is to be closed and when"* (Mersch, 2018). Governments are the ones who must decide because they have the democratic legitimacy to do so. Central banks, instead, were given independence precisely to eschew those political trade-offs and concentrate solely on price stability. In addition to the lack of input legitimacy, conservatives argue that becoming more promotional could also undermine their output legitimacy, which is the ability to deliver on their mandate. They emphasise how monetary policy has an inherently cyclical logic which contrasts with the structural nature of climate change (Dietsch, 2023). As discussed above, it is difficult to "green" asset purchases during a phase of tightening. Crucially, taking a guiding position could also lead to the loss of independence, which is what independent regulators rely on to carry out their functions. In this regard, Weidmann, the former governor of the

Bundesbank, said that "*central banks should beware mission creep"*, referring to this potential erosion of independence (Weidmann, 2020).

Progressives, on the other hand, argue that "market-neutral" practices may be at odds with an efficient allocation of resources (Dietsch et al., 2023). Isabel Schnabel, current member of the ECB Executive Board, has spoken at length about the need to go beyond market neutrality. Quoting her: "*in the presence of market failures, market neutrality may not be the appropriate benchmark"* (Schnabel, 2020). Further: *"In view of such market failures, it seems appropriate to replace the market neutrality principle by a market efficiency principle"* (Schnabel, 2021), which could justify "tilting" towards greener and safer assets. Yet, progressives also recognise how not doing enough could ultimately entail much bigger risks than the loss of independence. In the words of Elderson, current ECB member of the Board, *"the risk of doing too little too late is significantly larger than the risk of central banks… overstepping their mandate"* (Elderson, 2021). Notably, central banks reinterpreting their mandate in a flexible way has historical precedents. In the aftermath of the Global Financial Crisis, central banks stepped in and compensated the lack of political efforts, in some cases pursuing much more than price stability - in the case of the ECB, it was about saving the euro (Baer et al., 2021). Nonetheless, despite providing strong reasons to depart from the status quo, the thorny issue of input legitimacy remains a hurdle for progressives. One solution is broadening the mandate: the Bank of England, as of 2021, has been tasked with "following and supporting the government's transition to NetZero" (Jackson&Bailey, 2023). For other central banks, this solution would be very difficult to implement – changing the mandate of the ECB would require the approval of all 27 Member States. Upon these premises, many have pleaded for some sort of political coordination with governments (Baer et al., 2021)(Dietsch et al., 2021)(Klooster&Boer, 2023).

The ECB's green turn and the way forward

The ECB's steps in climate policy can be divided into three distinct periods. Prior to 2018, climate change was not considered a significant issue, despite Carney (2015) had already pronounced its influential speech. From 2018 to 2020, many officials raised concerns, but they mostly clashed with conservative views, resulting in no significant action taken by the bank (Deyris, 2023). Meanwhile, in 2018 the ECB entered the Network for Greening the Financial System (NGFS). The turning point came in 2021 with the Monetary Strategy Review, in which a 4-year climate-action plan was announced. In addition to adopting various informational initiatives, the ECB expressed intention to incorporate climate criteria into its monetary policy tools (ECB, 2021). In 2022, the ECB confirmed its commitment to decarbonise both its collateral framework and its Corporate Sector Purchase Program (CSPP) *"on a path aligned with the goals of the Paris Agreement"* (ECB, 2022). This statement clearly hints at a more far-reaching motive then a purely risk-based approach.

This "green turn" reflected a shift in ideas, which can be detected in the speeches of central bank officials (Deyris, 2023). Mersch and Weidmann, as highlighted above, advocated for the ECB to prioritize inflation over the involvement in a political agenda with distributional impacts. They cautioned against potential

challenges to legitimacy if the ECB were to engage in any market-shaping initiative. Contrary to the concerns about mission creep raised by Weidmann, the lack of more ambitious action on climate issues is now perceived as the primary threat to the ECB's output legitimacy, indicating a change in perspectives (Deyris, 2023). Accordingly, Elderson (2023) has said: *"Preserving price stability means preserving climate and nature stability"*. The change in leadership after the 8-year term of the Draghi cabinet has been pivotal in this ideational shift (Deyris, 2023). Lagarde, Schnabel and Elderson have all been key promoters of the new green agenda of the ECB. Elderson, interestingly, happens to be also the current chair of the NGFS (ibid.).

As discussed above, the problem with a more progressive stance stems from the lack of input legitimacy. ECB policymakers have found a solution in the often-ignored secondary mandate, which states that the ECB must "support the general economic policies in the Union" (Art. 127 TFEU). Nevertheless, Klooster and Tilburg (2020) contend that, from a legal perspective, the specification of the secondary mandate is based on a paradox. If on the one hand the general objectives of the Union are ambiguous – again, there are 27 Member States and often many contrasting objectives - on the other the ECB cannot define them on its own without raising legal and democratic concerns (ibid.). Hence, to attain input legitimacy, scholars have suggested establishing a continuous dialogue with EU institutions (ibid.)(Baer et al., 2021). EU institutions, as political authorities, could spell out clearly the objectives for the ECB, and they would also provide the necessary checks and balances associated with more promotional policies. From the ECB's standpoint, losing some operational independence would be a small price to pay for increasing its input legitimacy (Dietsch, 2023). Consequently, having found legitimacy, the ECB could implement more far-reaching green policies, such as lower green interest rates (Klooster&Tilburg, 2020).

Conclusions

This essay has highlighted, firstly, how climate change risks entail market failures. If the market perfectly priced all the risks, there would be no need to the market-shaping approach advocated for central banks.

Secondly, it has shown that, for central banks, policy discretion depends on political independence. Central banks in the developing world possess more leeway in formulating green policy instruments because they respond to their governments. Western central banks, instead, have been rendered independent to eschew political interference and to deliver on a narrower mandate. This, in turn, limits the range of promotional tools they can adopt.

Thirdly, it has illustrated how greening central banks' toolkits faces significant hurdles. Some are temporal (the nascent phase of the green bond industry), some are structural (monetary policy has a logic of its own) and some have not yet materialised (green bubbles). Their existence suggests why policymakers have so far refrained from more ambitious implementations.

Finally, this essay has investigated debates between "prudential" conservatives and "promotional" progressives. The discourse analysis of central bankers' speeches has helped unveiling the contrasts between

the two factions and, in the case study of the ECB, how these dynamics played out. Recognising the magnitude of climate change, progressives acknowledge that inaction comes at enormous cost. But they also recognise the lack of input legitimacy. This is why many, particularly in the case of the ECB, have argued for a renewed coordination with political institutions as a solution for the legitimacy deadlock.

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