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Managing climate change risk: a responsibility for politicians not Central Banks

Peterson K. Ozili

Abstract

This article discusses the need for climate change risk mitigation and why it is not the responsibility of Central Banks to mitigate climate change risk. The paper argues that the responsibility for managing climate change risk should lie with elected officials, other groups and institutions but not Central Banks. Elected officials, or politicians, should be held responsible to deal with the consequence of climate change events. Also, international organizations and everybody can take responsibility for climate change while the Central Bank can provide assistance - but Central Banks should not lead the climate policy making or mitigation agenda.

Keywords: Climate change, environment, Central Bank, government, atmosphere, financial stability, risk management, climate change risk, financial sector, responsibility, financial institutions.

1. Introduction

Climate change risk refers to the possible loss, both monetary and non-monetary, resulting from the unfavorable effects of global warming. For instance, climate change events such as severe storms and flooding can damage crops, buildings, infrastructure and assets, which can negatively affect agriculture, fisheries, forestry, health care, events, real estate, offices, tourism and general business. Emerging climate change events often give rise to climate change risk, and as a result, managing climate change risk has become important. The United Nation's intergovernmental panel on climate change has stated that it is beyond reasonable doubt that human emissions of greenhouse gases are affecting the climate primarily as a result of the combustion of fossil fuels which produces carbon dioxide (CO2). The result is an increase in the amount of CO2 in the atmosphere which affects the balance between incoming and outgoing radiation and thereby the planet's temperature (Olovsson, 2018).

Managing climate change risk requires developing risk assessment and risk management strategies that are appropriate to reduce the unfavorable effects of global warming. Many taskforce and groups have been formed to bring countries together to find a collective solution to climate change risk such as the Network for Greening the Financial System[1], the Task Force on Climate-related Financial Disclosures[2], and the UNESCO Climate Change Initiative[3]. The European Central Bank (ECB) has also joined the international community in the fight against climate change and its risks. The ECB is working to identify the risks that climate change could present to the European financial system and the economy through extreme weather events and uncertainties related to the transition to a low-carbon economy[4]. There is also wide support for managing climate change risk in the academic literature as climate change has dominated much of the environmental science literature (see Urry, 2015; Burke and Emerick, 2016; Tol, 2018; Morelli et al, 2016; Obersteiner et al., 2001; Stone, et al., 2012; Rosenzweig et al, 2007, etc.).

Recently, the climate change debate has infiltrated the financial sector. An emerging debate, supported by the International Monetary Fund (IMF) and other interest groups, advocates that Central Banks should join in fighting climate change risk,[5] because extreme climate change events can destroy the assets of financial institutions in the financial sector which may destabilize the

[1] 'Network for Greening the Financial System', can be found at: https://www.banque-france.fr/en/financial-stability/international-role/network-greening-financial-system
[2] the Task Force on Climate-related Financial Disclosures, can be found at: https://www.fsb-tcfd.org/
[3] the UNESCO Climate Change Initiative can be found at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/sc_climChange_initiative_EN.pdf
[4] European Central Bank policy document on climate change, can be found at: https://www.ecb.europa.eu/ecb/orga/climate/html/index.en.html
[5] IMF policy document on climate change, can be found at: https://meetings.imf.org/en/2019/Annual/Schedule/2019/10/16/imf-seminar-climate-change-and-central-banks

financial system (Campiglio et al, 2017; Batten et al, 2016; Olovsson, 2018). But this calls into question whether Central Banks have the expertise to manage climate change risk, and also raise the question of who should be responsible for managing climate change risk – should it be Central Banks, the international community, elected officials, politicians, or some remote agency? This paper discusses and analyze why it is not the responsibility of Central Banks to mitigate climate change risk - even in the financial sector. This paper does not challenge the climate change agenda rather it supports the urgent need for swift action to reduce the risk of climate change. However, this paper contest the idea that Central Banks should take a lead role in dealing with the problems of climate change.

The discussion in this article contributes to ongoing debates on how to manage climate change risk (Kunreuther et al, 2013; Obersteiner, et al, 2001; Fünfgeld, 2010, Ozili, 2020a). The discussion also contributes to the literature that link increasing climate change events to environmental degradation (Wilby, 2007; Raleigh and Urdal, 2007; Saxon et al, 2005). Thirdly, the discussion adds to the literature that examine the role of climate change in the financial sector (Campiglio et al, 2017; Batten et al, 2016; Olovsson, 2018; Dlugolecki, 2008; Folger-Laronde and Weber, 2018; Ozili, 2020b). Finally, the remarks on the responsibility for climate change in this article are limited to the most significant arguments against a Central Bank-led climate change mitigation process, and the reasons provided in this paper are intended to stimulate debates for a better solution on responsibility for climate change.

The rest of the paper is structured as follows: Section 2 discuss how climate change events affect the financial sector and the role of Central Banks. Section 3 discuss why it's not the responsibility of Central Banks to manage climate change risk. Section 4 discuss why it's the responsibility of elected officials and other stakeholders to manage climate change risk. Section 5 concludes.

2. Climate change, the financial sector and central banking

It is important to first establish the channels through which climate change could affect the financial sector and the implication for Central Banks. Batten et al (2016) identify two types of risks for Central Banks to worry about. The first risk is a weather-related natural disaster. Such disasters could trigger financial and macroeconomic instability if it severely damages the balance sheets of households, corporations, banks and insurers (Batten et al, 2016). Also, the direct damage caused by droughts, floods, hurricanes and heat waves as well as the damage ensuing from rising sea levels can affect firms and businesses, including banks in significant ways, and these institutions may face increasing economic risks and financial losses in their transition to adapt to a less fossil-based economy (Olovsson, 2018). The second risk is the sudden and unexpected tightening of carbon emission policies, and such policies could lead to a disorderly re-pricing of carbon-intensive assets and a negative supply shock (Batten et al, 2016).

Why Central Bank should get involved in fighting climate change. There is the argument that financial institutions grant credit to businesses that emit pollutants into the environment, and by doing so, financial institutions also contribute in harming the environment. Proponents of this argument suggest that central banks should implement policies that compel financial institutions to reduce lending to such businesses through imposing higher interest rates on such businesses, or through some conditional lending ban which may be lifted when such businesses can provide evidence on the steps they are taking to protect the environment they operate in, and that Central Banks are in the best position to enforce such policies. There is also the macroeconomic argument that macroeconomic policies can help to control climate change risk through the impact of macroeconomic policies on financial institutions because Central banks can issue policies that will discourage financial institutions from supporting businesses that harm the environment.

So, what can Central Banks do about climate change risk? Some studies such as Olovsson (2018) suggest two things Central Banks can do. One, Central Banks can impose additional capital requirement on financial institutions that lend to businesses that are exposed to climate change risk. Two, Central Banks can use green quantitative easing that encourage Central Banks to purchase green bonds themselves and then encourage financial institutions to purchase bonds from companies with a lower usage of fossil fuels - this is based on the assumption that if Central Banks 'lead the way' with green investments, other financial agents will then follow the same step (Olovsson, 2018). Batten et al (2016) suggest that climate-related disclosures by financial institutions can help to facilitate an orderly transition to a low-carbon economy if it helps investors in their assessment of financial risk exposures.

3. Why It's Not the Responsibility of Central Banks – the reasons

The previous section showed that Central Banks, by their nature, can play a role in reducing climate change risk. But the idea that Central Banks should take the lead role or responsibility for mitigating climate change risk even in the financial sector needs to be challenged. Can Central Banks provide some assistance in fighting climate change risks? Certainly, yes! But is it the responsibility of Central Banks to do so simply because they have the financial resources to do so? The answer is no. Below are some justifications on why it is not, and should not be, the responsibility of Central Banks to fight climate change risk.

3.1. No control over industries that exploit the environment

Central Banks do not regulate or supervise the businesses and industries whose activities directly harm the environment such as the extractive industries. In other words, Central Banks do not have control over industries whose activities lead to the emission dangerous pollutants into the

atmosphere and the environment. Central Banks also do not have the competent expertise in climate change management which would therefore make Central Banks incompetent to fight climate change risk in any capacity even in the financial sector. Moreover, the regulators of the extractive industry may feel they are more competent and better positioned to design a sound regulatory framework to manage climate change risk than Central Banks, and they may use political and legal means to oppose a Central Bank–led climate change mitigation process. Thus, Central Banks may face opposition and may become unsuccessful if they choose to lead the climate change mitigation policy agenda.

3.2. Macroeconomic policies have no effect on climate change events

Central Banks often use macroeconomic policy tools to manage the economy such as increasing or decreasing interest rates and the level of money supply. Central Banks will be able to justify their effort to mitigate climate change for the financial system and the economy if there is the possibility that a change in macroeconomic policy variables can reduce the likelihood of climate change events occurring. But currently there is no known or hypothesized causal relationship that exist between macroeconomic policies and increase or decrease in climate change events. In fact, there is no evidence that a decrease (or increase) in interest rates will lower the probability that an earthquake, a storm or typhoon will occur.

A study by Oxford Economics show that a 2 degrees' Celsius increase in global temperatures will cut economic growth by as much as 7.5%[6], however the study did not model the effect of macroeconomic policies on climate change outcomes. Therefore, it is difficult to establish a causal relationship between macroeconomic policies and the probability of a climate change event occurring. Thus, based on the lack of evidence for a causal relationship between macroeconomic policy making and climate change outcomes, there is no macroeconomic argument that explains how Central Banks can use macroeconomic policies to fight climate change events or its risks.

3.3. Difficulty in measuring climate change risk

Risk that cannot be measured cannot be managed. One common failure in risk management is the mis-measurement of risk, that is, the tendency to measure risk wrongly (Kritzman and Rich, 2002). When risk is measured incorrectly, the risk information that will be generated and communicated to decision makers will be inaccurate and may mislead them to make bad decisions which can have serious consequences including financial loss and loss of reputation of the decision maker. History is filled with many examples of large corporations that collapsed because they made strategic decisions using inaccurate information generated from a faulty risk measurement, management and reporting process!

[6] Oxford Economic report, can be found at: https://www.oxfordeconomics.com/my-oxford/publications/522177

Just like other risks, climate change risk has to be measured using some risk measurement tools. The difficulty in finding the right risk measurement tool to measure climate change risk is a major challenge which Central Banks will face if they choose to mitigate climate change risk. Also, given the changing nature of climatic conditions, there is the likelihood that climate change risk may not only be mis-measured, the risk measure may also be overestimated or underestimated, and the resulting risk information may mislead Central Banks to make wrong climate change risk management policies which can lead to reputational damage to Central Banks. For this reason, most Central Banks may avoid mitigating climate change risk due to difficulty in measuring climate change risk.

3.4. Financial institutions' activities have an indirect impact on the climate

Central Banks know that the activities of supervised financial institutions do not have a direct impact on the environment, the atmosphere or climate, and this possibly explains why some Central Banks do not worry about climate change risk at all. Some Central Banks feel that since climate change affects most institutions, not just financial institutions, the government should mitigate climate change risk themselves while Central Banks can provide some assistance to the government.

Notwithstanding, there is some speculation that if much pressure is put on Central Banks to formulate policies for climate change risk mitigation in the financial sector, Central Banks may take one of three options. Firstly, the Central Bank will require supervised financial institutions to allocate some risk capital for climate change risk. Secondly, Central Banks may require supervised financial institutions to reduce or cut lending to businesses whose activities increase climate change risk to the environment and the atmosphere. Thirdly, Central Banks can include climate change events in their stress testing models for the financial sector.

The first policy option may be opposed by supervised financial institutions because supervised financial institutions do not have control over climate change events and it will not make sense to them to allocate risk capital for climate change events that have not occurred yet and which may not even occur in the near future and for which they have no control. The second policy option which propose lending cuts may be opposed on the ground that such businesses are being discriminated against by the Central Bank for doing the business they were issued a license to do legitimately, and imposing a restrictive lending policy may constitute bad public relations (PR) for the Central Bank. The need to avoid negative publicity will make the Central Bank refuse to pursue such policy action when fighting climate change risk in the financial sector.

3.5. Climate mitigation is not a statutory objective of Central Banks

Finally, most Central Banks have a common objective which is to maintain 'price stability' and 'financial system stability', among others. There is no Central Bank in the world that has 'climate

change mitigation' or 'climate change risk management' as one of its statutory objectives. Based on this, Central Banks may not accept the responsibility to manage or mitigate climate change risk for the economy or in the financial sector.

4. Shifting the responsibility to others

4.1. Politicians or Elected Officials

Elected officials or politicians are appointed by the people to represent their interest in national policy making, and since a large number of the population may be affected by climate change events when they occur, it makes sense for elected officials or politicians to develop policies to address the increasing threat from climate change to the environment. Politicians should develop the policies and can seek help from private and government agencies in implementing the policies while the Central Bank may provide financial assistance to elected officials to implement the climate change policies.

There are six (6) major reasons why politicians or elected officials are in a better position to develop policies or laws to mitigate climate change risk than Central Banks. One, elected officials or politicians have the power to deploy emergency funding and resources to reduce climate-related damages after climate change events have occurred. Two, elected officials or politicians have the ability to persuade, negotiate and coordinate with the international community to provide solutions to national climate change problems. Three, politicians have the ability to create special purpose agencies to deal with climate change issues. Four, only politicians can vote on imposing climate change tax on citizens and businesses as a climate change control policy option. Five, politicians have the power to impose sanctions on businesses that harm the atmosphere and environment to force them to reduce the emission of harmful substances into the environment. Six, politicians can easily obtain international expert services to monitor climate change risk before they occur.

4.2. International Climate Change Organizations and Groups

Even without politicians, elected officials or Central Banks being involved, special organizations or international groups may be created for the purpose of cross-country cooperation and coordination to deal with climate change problems. Such organizations will often require countries to join the organization as members and abide by the rules governing its mandate, and in exchange for membership, the organization will provide joint solutions to the climate change problems of its member countries.

Such organizations may be formed as an international organization, taskforce, round-table committee, think-tank or consortium. In such organizations, joint solutions are reached for the

benefit of member countries while technical assistance is provided to member countries experiencing severe climatic change problems. These organizations or groups, due to their special nature, can obtain funds from international lenders such as the IMF and World bank to help member countries cope with climate change events, and this is one of the reasons that attract countries to join these organizations or groups.

4.3. A responsibility for everyone

Another safer policy option to deal with climate change is to make climate change risk mitigation a responsibility for everyone. Governments can encourage citizens to: (i) avoid living in toxic and polluted environment, (ii) build houses that are resistant to heavy winds, (iii) discourage residential settlements near the sea or river, (iv) the government should give daily information to citizens about weather conditions in local areas and cities through media broadcasts (v), and governments should also give reliable forecast about future climate change events to help citizen prepare for severe climatic change events. For corporations, governments can require all corporations to subscribe to climate reporting agencies that generate real-time information on climate change, and corporations can use such information to protect their employees and corporate assets located in areas that are prone to climate change events. Secondly, governments may require all corporations to conduct internal risk assessment on how they would respond to unfavorable climate change events and such assessment should be audited by a competent external auditor, expert or agency appointed or licensed by the government. Companies may also be required to make other climate-related disclosures from time to time. The goal is to ensure that everybody, both businesses and individuals, takes responsibility for climate change.

5. Conclusion

This paper is a response to recent calls for Central Banks to lead the way in climate change risk mitigation. This paper discussed whether Central Banks should be responsible for climate change risk mitigation. It identified five major reasons why Central Banks should not be responsible for managing climate change risk. Central Banks have no control over the industries that exploit the environment because Central Banks do not regulate these industries and may face opposition from the regulators of extractive industries. There is weak or no evidence that the macroeconomic policies of Central Banks can reduce the likelihood of the occurrence of climate change events. Central Banks may have difficulty in measuring climate change risk accurately, and climate change risk may be overstated or understated. Central Banks may not worry about climate change risk because the activities of financial institutions have an indirect, not direct, impact on the climate. Climate change risk mitigation is not a statutory objective of Central Banks.

The policy implication is that the responsibility for climate change risk mitigation should be shifted to politicians who are elected officials of the people. Also, international climate change organizations or groups can take responsibility for mitigating the climate change risk of member countries. Finally, citizens in a country or region should have equal responsibility for climate change. Climate information should be provided to every citizen to help them prepare for future climatic conditions.

A single institution should not have responsibility for climate change risk management be it a Central Bank or government agency. Even in an industry, the regulator alone should not be responsible for mitigating climate change risk in the industry - this is because the effects of climate change events are unpredictable and can have far-reaching effects beyond the ability of a single industry regulator. Therefore, there is need for joint collaboration to deal with future climate change problems.

Finally, it is important to point out that the use of international or inter-agency collaboration to deal with climate change problems is at best an experiment which is subject to trial and error, and we can only rely on future research to know whether climate change events have become more or less frequent since the emergence of international climate change groups or organizations.

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