



Principles for Addressing Climate Systemic Risks with Capital Buffers

Pierre Monnin (CEP, LSE)

Agenda

- Climate risks, financial stability and macroprudential policy – What do we know?
- Climate risk and systemic capital buffers – Which principles should underpin the design of buffers?

Background papers



Climate-related systemic risks and macroprudential policy

August 2023

Summary


Climate change has a clear systemic dimension: its consequences are not only widespread across all sectors and regions, but potential concentrations, spillovers and interlinkages within the financial system risk further amplifying its economic and financial impacts. The systemic nature of climate change for financial stability suggests the need for a macroprudential response that goes beyond a (microprudential) focus on individual firms and ensures a consistent approach across the financial system.

While climate change may be predictable, the timing of its financial impacts is uncertain. Therefore, central banks and financial supervisors must rapidly develop sound risk management practices adapted to a context in which policy decisions rely on imperfect data and high uncertainty.

Existing macroprudential policy toolkits can be deployed now to address climate-related systemic risks with some possible adaptations to reflect the unique features of climate-related risks, like the long time horizon over which they may materialise, their strong dependency on the speed and direction of the low-carbon transition, and the specific data and forward-looking measurement methodologies required to manage them.




Two possible instruments that can be tailored to address systemic climate-related financial risks are: (i) systemic risk buffers, to increase the resilience of the financial system to climate-related shocks and contribute to mitigating the build-up of future risks; and (ii) measures limiting exposure concentrations, which could target and thereby mitigate sources of risk where they are greatest. While there are undeniable challenges in devising these macroprudential responses to climate-related systemic risks (e.g. modelling complexity and uncertainty, partial data coverage), the risks will only increase with inaction. This points to the need for central banks and financial supervisors to adopt a forward-looking approach and progressive deployment of policy in their response to climate risk.


This paper is part of a toolbox designed to support central bankers and financial supervisors in calibrating monetary, prudential and other instruments in accordance with sustainability goals, as they address the ramifications of climate change and other environmental challenges. The papers have been written and peer-reviewed by leading experts from academia, think tanks and central banks and are based on cutting-edge research, drawing from best practice in central banking and supervision.



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PRINCIPLES FOR ADDRESSING CLIMATE SYSTEMIC RISKS WITH CAPITAL BUFFERS

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CEP POLICY BRIEF
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Climate risks, financial stability and macroprudential policy

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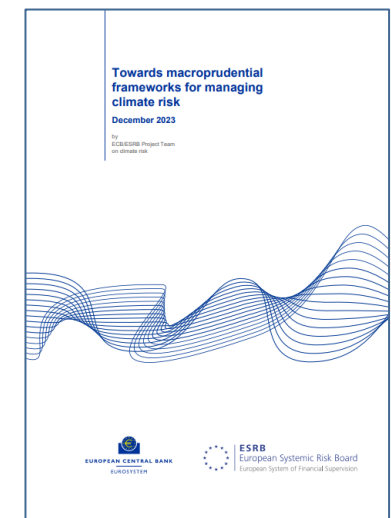
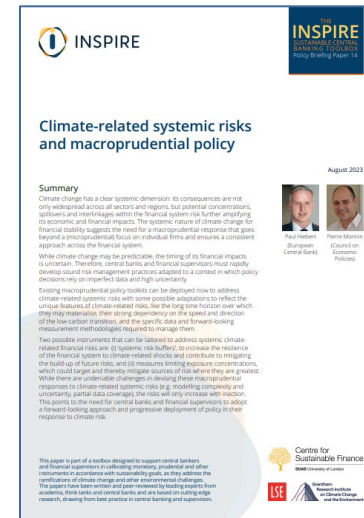
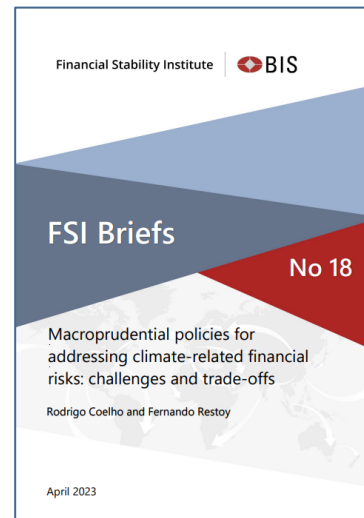
What do we know?

What do we know about climate risks and financial stability

- Climate risks are potential systemic risks
- Climate systemic risks are likely to be underestimated
- Unfolding path of climate risks is key for the level of financial (in)stability
- An orderly transition starting now is the scenario that minimizes risks for financial stability
- Climate risks are unevenly distributed in the financial system and in the banking sector
- Banks are not well prepared to manage climate risks
- Financial institutions contribute to climate change and the buildup of climate systemic risks.

Addressing climate risks with macroprudential policy

- Potential systemic risk requires adequate macroprudential policy response
- Holistic response, starting with sound micro-prudential policy, is necessary
- Existing macroprudential policy toolkits can be deployed now to address climate systemic risks, although with possible adaptations to reflect their unique features



Macroprudential buffers are a promising option

CEP
council on
economic policies

SYSTEMIC RISK BUFFERS - THE MISSING PIECE IN THE PRUDENTIAL RESPONSE TO CLIMATE RISKS

Pierre Monnin

CEP POLICY BRIEF
June 2021

INSPIRE

THE
INSPIRE
SUSTAINABLE CENTRAL
BANKING TOOLBOX
Policy Briefing Paper 08

Greening capital requirements

Summary

Capital requirements play a central role in financial regulation and have significant implications for financial stability and credit allocation. However, in their existing form, they fail to capture environment-related financial risks and act as a barrier to the transition to an environmentally sustainable economy.

Environmental issues can be incorporated into capital requirements using three different approaches: (i) microprudential approaches, which suggest that capital requirements need to be adjusted based on micro-level exposures to environmental risks; (ii) weak macroprudential approaches, which emphasise the exposure of financial institutions to systemic risks linked to specific sectors and geographical areas; and (iii) strong macroprudential approaches, whereby systemic risks are analysed by explicitly considering macrofinancial feedback loops and double materiality.

In the age of environmental crisis, strong macroprudential approaches should play a prominent role in the greening of capital requirements. Green differentiated capital requirements (GDCRs) are one of the tools that are consistent with a strong macroprudential approach. If designed to accurately capture the environmental footprint of bank assets and minimise adverse financial side effects, GDCRs can contribute to the greening of the banking system and the reduction of physical risks. The positive effects of GDCRs can be enhanced if they are combined with other financial and non-financial environmental policy tools.

This paper is part of a toolbox designed to support central bankers and financial supervisors in calibrating monetary, prudential and other instruments in accordance with sustainability goals, as they address the ramifications of climate change and other environmental challenges. The papers have been written and peer-reviewed by leading experts from academia, think tanks and central banks and are based on cutting-edge research, drawing from best practice in central banking and supervision.

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Working Paper Series

Designing a macroprudential capital buffer for climate-related risks

Florian Bartch, Julia Busies, Tina Emambakhsh, Michael Grill, Mathieu Simoens, Martina Spaggiari, Fabio Tamburini

October

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No 2943

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Fundamental objectives of macroprudential policy

- Ensure that the financial system has adequate shock absorption capacities (resilience objective)
- Contain the buildup of financial vulnerabilities (mitigating objective)

Macroprudential instruments have unintended side effects

Systemic capital buffers for climate risks can potentially

- Reduce the aggregate volume of loans, including to activities of high economic value
- Prevent loans to firms with a current unsustainable business model but engaged in a transition process and needing funding for it
- Push firms to seek funding in other jurisdictions and with non-bank financial institutions
- Exacerbate transition risks if implemented too quickly or without proper planning



Addressing climate risks requires nuanced, forward-looking responses

Climate risk and systemic capital buffers

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**Which principles should underpin
the design of buffers?**

Four core principles

1. **Absorption** - The capital buffer must be calibrated to absorb climate systemic shocks
2. **Prevention** - The capital buffer must be calibrated to mitigate the buildup of climate systemic risks
3. **Individualisation** - The capital buffer level must be institution-specific with a common, non-divestible and systematic base
4. **Recalibration** - The capital buffer level must be periodically recalibrated to reflect the observed transition path and individual risk profiles

Absorption

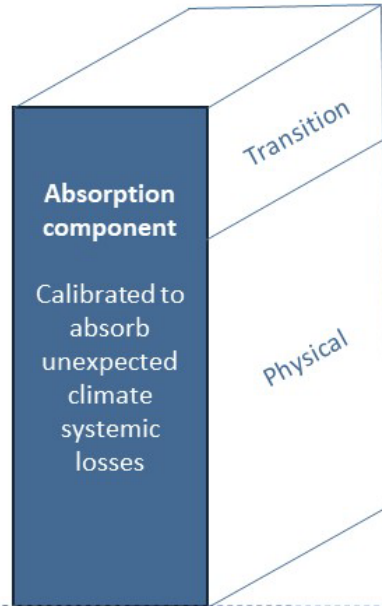
The capital buffer must be calibrated to absorb climate systemic shocks

- The buffer must be calibrated to absorb **unexpected systemic losses** from climate shocks
- The buffer must reflect **physical and transition** risks
- The buffer must reflect the **structure of the economy**

Absorption

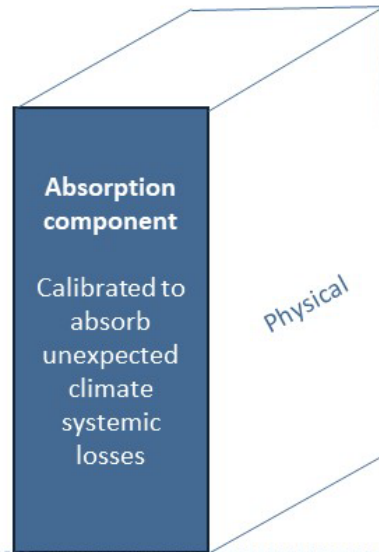
Financial system with average exposure to physical and transition risks

E.g. Global banking system



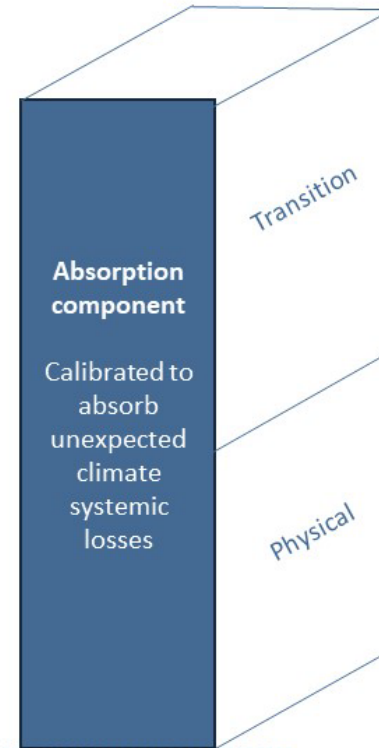
Financial system with higher exposure to physical risks and low transition risks

E.g. low-income country banking system



Financial system with lower exposure to physical risks and high transition risks

E.g. high-income country banking system

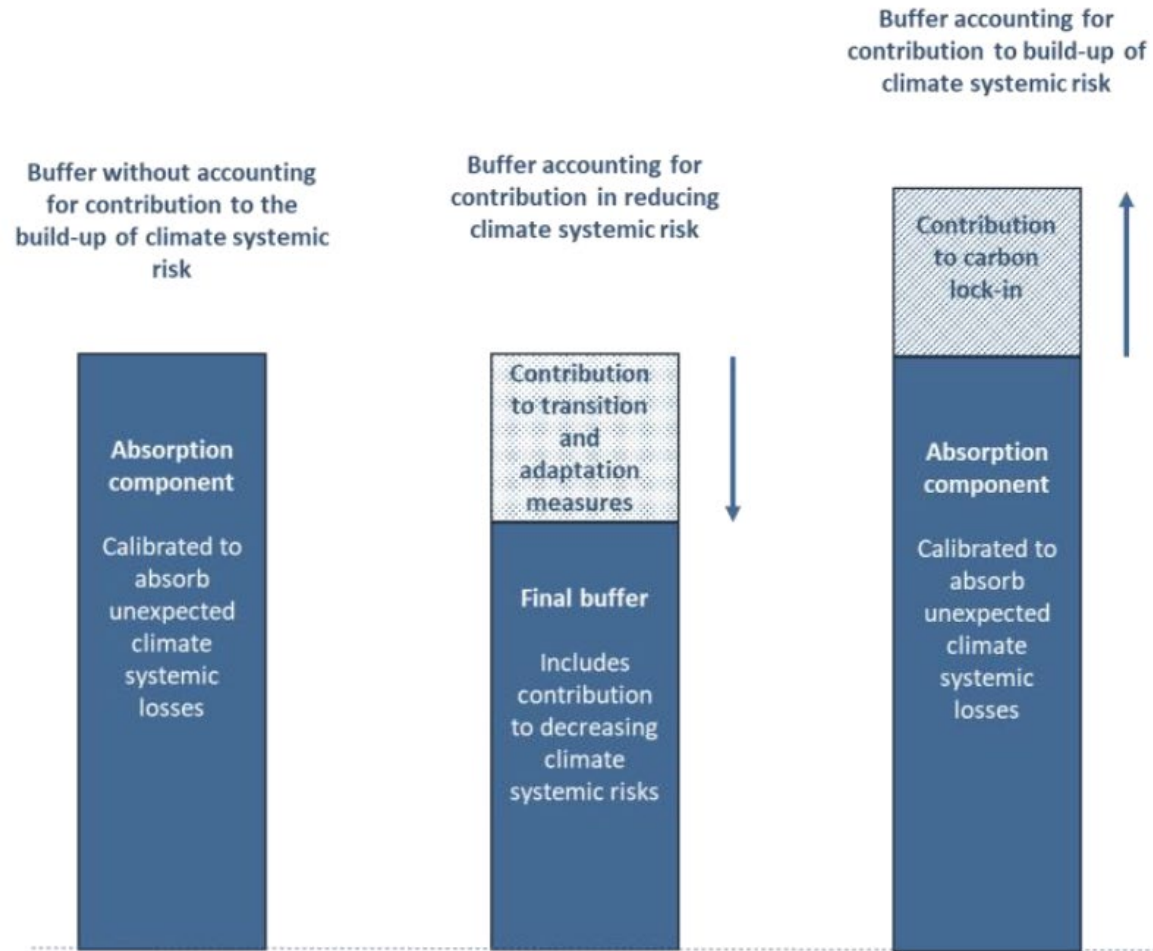


Prevention

The capital buffer must be calibrated to mitigate the buildup of climate systemic risks

- The buffer must **include incentives** to mitigate the buildup of climate systemic risks
- The buffer must support actions for climate change **mitigation and adaptation**
- The buffer must rely on **forward-looking indicators** to assess systemic risk mitigation by financial institution

Prevention



Individualisation

The capital buffer level must be institution-specific with a common, non-divestible and systematic base

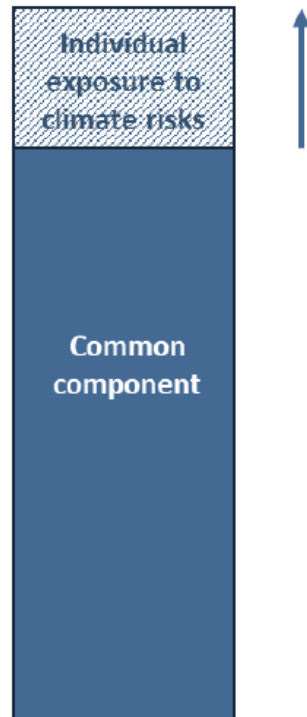
- The buffer must have an institution-specific **component that reflects individual exposure** to climate risks
- The buffer must have an institution-specific **component that reflects individual contributions** to mitigation and adaptation measures
- The buffer must have a **significant common, non-divestible, and systematic basis**

Individualisation

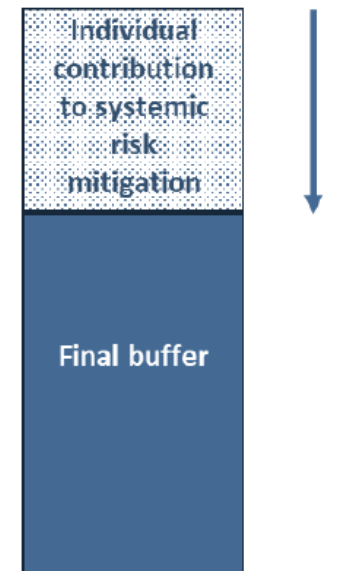
Bank without individual risk exposure and no contribution to systemic risk mitigation



Bank with individual exposure to climate risks and no contribution to systemic risk mitigation



Bank with no individual exposure to climate risks and contribution to systemic risk mitigation



Recalibration

The capital buffer level must be periodically recalibrated to reflect the observed transition path and individual risk profiles

- The buffer's common component must be **dynamically adjusted to reflect the transition path** taken by the economy
- The buffer's institution-specific component must be **frequently adjusted to reflect the institution's practices**

Recalibration

