Financial Regulation, Climate Change, and the Transition to a Low-Carbon Economy  
A Survey of the Issues  
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OUTLINE

• Climate change and the financial sector: A Timeline
• Key Questions / Key Findings
• Closing information gaps, improving disclosure, promoting standards
• Climate risk analysis: the state of the art
• Should Financial Policy and Regulation Promote Low-Carbon Transition?
• Walking a tightrope to net zero
Climate change and the financial sector: A Timeline

- **2000**: First insurance industry reports on climate-related risks
- **2005**: First IPCC report on economic impact of climate change; First UNEPFI report
- **2010**: Paris Agreement
- **2015**: G20 calls on FSB to “review how the financial sector can take into account climate issues”
- **2020**: First climate “stress tests” for banks
- **2020**: First regulatory attempts to analyze climate risks for insurers
- **Growing investor interest in ESG**
Key Questions

• What is the role of financial sector policies in the transition to a low-carbon economy?
• What is the role of central banks and financial regulators?

None of their business

Proactive role
Key Findings

• “Trying to see through a glass, darkly”

• “Brave New World”

• “Walking a tightrope to net zero”
Closing information gaps, improving disclosure, promoting standards

• **DATA GAPS**

• **CLIMATE-RELATED DISCLOSURES**

• **STANDARDS**
Climate risk analysis: the state of the art

- Well-established risk management tools in the financial industry (e.g. Value-at-Risk models and stress tests) cannot be used off-the-shelf to measure climate-related risks
- Exploratory scenario-based impact assessments have to be used instead
Climate risk analysis: the state of the art

**Specificities of climate scenarios**

<table>
<thead>
<tr>
<th></th>
<th>Standard scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizon</td>
<td>Short to medium run</td>
</tr>
<tr>
<td>Scenario drivers</td>
<td>Economic and financial</td>
</tr>
<tr>
<td>Shock values</td>
<td>Guidance from historical data</td>
</tr>
<tr>
<td>Aggregation</td>
<td>National</td>
</tr>
<tr>
<td>Feedback loops</td>
<td>Work in progress (e.g. macro models with financial frictions)</td>
</tr>
</tbody>
</table>
Climate risk analysis: the state of the art

**ISSUES**

- Model risk
- Time horizon
- Poor basis for policy action
- Not necessarily risks to financial stability
Climate risk analysis: the state of the art

ADVANTAGES, nonetheless

• Sizing risks vs testing firms’ capital adequacy / setting capital requirements
• Raising awareness
• Providing incentives
• Strengthen supervisory frameworks
Should Financial Policy and Regulation Promote Low-Carbon Transition?

• **PROPOSALS (in the literature)**
  
  • exposure or concentration limits
  
  • designation of systemically important financial institutions (SIFIs)
  
  • adjusting risk weights
Should Financial Policy and Regulation Promote Low-Carbon Transition?

• ...BUT

  • how to distinguish ‘green’ from ‘brown’ assets
  • ‘greenness’ is not necessarily equivalent to low risk
  • using regulatory tools to promote climate transition would complicate the conduct of policy
  • ...and, based on the available evidence, it is unlikely to be effective
Should Financial Policy and Regulation Promote Low-Carbon Transition?

- The GSF has a **very limited impact** on the conditions for financing green projects…

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**Figure 1: Impact of the GSF on Annual Loan Rates in Percentage Points**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Low GSF at 0.85 (15% reduction in prudential requirements)</th>
<th>Moderate GSF at 0.75 (25% reduction in prudential requirements)</th>
<th>High GSF at 0.5 (50% reduction in prudential requirements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Annual Loan Rate</td>
<td>4.41%</td>
<td>4.41%</td>
<td>4.41%</td>
</tr>
<tr>
<td>Annual Loan Rate with GSF</td>
<td>4.28%</td>
<td>4.19%</td>
<td>3.97%</td>
</tr>
<tr>
<td>Percentage Point Change in Annual Rate</td>
<td>0.13PTS</td>
<td>0.22PTS</td>
<td>0.44PTS</td>
</tr>
</tbody>
</table>

Should Financial Policy and Regulation Promote Low-Carbon Transition?

• ... while for the penalizing factor (PF) to have a significant impact on the cost of a project, its calibration must be (very) high ...

... but a high PF affects the capital of banks, which might respond by rationing credit

Should Financial Policy and Regulation Promote Low-Carbon Transition?

Figure 4. Key Challenges in Incorporating Climate-Related Risks in the Supervisory Process (responses by jurisdictions)

- Data availability: 10
- Methodological challenges: 7
- Risk transmission channels: 5
- Capacity/resources: 4
- Time horizon misalignment: 3
- Climate-related forecasts: 2
- Degree of awareness: 2
- Credit rating regime: 2
- International coordination: 2
- Taxonomy: 2

Source: BCBS (2020).
Should Financial Policy and Regulation Promote Low-Carbon Transition?

• Does a more ‘green-promoting’ role require a change in central banks and financial regulators’ mandates?

• It would raise major governance and operational challenges while having most probably a limited real-world impact → would it stand up under a cost-benefit analysis?
Walking a tightrope to net zero

• The road towards a low-carbon economy is going to be bumpy

• In this complex environment, central banks and financial regulators have to tread a fine line
Walking a tightrope to net zero

• Financial policy and regulation cannot deliver the transition to a low-carbon economy by itself

• Markets need a “critical signal for re-directing private investment and innovation to clean technologies, and to incentivize energy efficiency” (Georgieva 2021)
Walking a tightrope to net zero

• For central banks and financial regulators ...
  • A role to play in the transition to a low-carbon economy ...
  • ... but without overestimating their abilities or their toolkit, overstepping their mandate, or disregarding the possible unintended consequences of their actions
  • Always acting in concert with government climate policies ...
  • ... and avoiding to find themselves (again) in the role of ‘the only game in town’
Walking a tightrope to net zero

“Mission critical” ...

or

... “Mission vigilant” ?
Dimitri Demekas, Pierpaolo Grippa
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THANKS!