Managing Climate Related Financial Risks: Implications for Financial Institutions and Supervision

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Agenda

1. Climate Risks for the Financial Sector
2. Addressing Risks in Supervision
3. Key Global Initiatives
The impacts of climate change and climate related natural disasters pose risks to the soundness and stability of the financial sector.

Projected CO2-emission paths and type of associated risks

Physical and transition risks translate into financial risks

- Credit risk
- Operational risk
- Market risk
- Liquidity risk
- Business model risk

Risks
Green finance developments can also lead to risks

Drivers of green finance

- Investment opportunities
- Management of brown risks
- Taking social responsibility

Risks of green finance

- Green washing

Green bond market evolution

- Government Agencies
- Corporate
- Total
While progress is being made, financial sector participants have difficulties to deal with these risks

- **Risk management**: Limited understanding of risks and lack of integration in core functions of risk management. Tools and data to assess risks are just emerging.

- **Governance & strategy**: Risks are not imbedded in strategies, with lack of clear board and senior management responsibilities and awareness.

- **Disclosure**: Limited transparency on climate related risks, in and outside the financial sector.

- **Green finance**: Limited capacity to originate green finance.

- **Pricing externalities**: Lack of incentives and long term commitments by governments, make it difficult for FIs to price in risks adequately.
What steps to take in supervision? A selection of relevant challenges for supervisors in emerging markets
Challenge 1: building a better understanding of climate-related impacts in emerging markets

- Front runners, like BoE and DNB have started with assessing risks, building a narrative that helped to get other stakeholders along
- For regulators from developing countries there is a need to better understand the unique ways that local financial sectors can be affected by climate change

Example of a climate risk assessment by DNB (2017)

Physical risks
- General insurers
- Flood risk

Transition risks
- CO2-intensive assets
- Green finance

Example of measuring physical risk exposure

Scenario of a severe flood

<table>
<thead>
<tr>
<th>Estimated breaching probability</th>
<th>1 / 1,110 per years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated losses</td>
<td>EUR 57.6 billion</td>
</tr>
<tr>
<td>Residential property</td>
<td>EUR 15.6 billion</td>
</tr>
<tr>
<td>Business (exc. suspension of activities)</td>
<td>EUR 11.8 billion</td>
</tr>
<tr>
<td>Suspension of business activities</td>
<td>EUR 8.5 billion</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>EUR 2.0 billion</td>
</tr>
<tr>
<td>Other</td>
<td>EUR 19.7 billion</td>
</tr>
<tr>
<td>Total</td>
<td>EUR 57.6 billion</td>
</tr>
</tbody>
</table>

Example of measuring transition risk exposure

### Banks

- **1898 bn €**
  - **Fossil fuels**: 2.6%
  - **CO₂-intensive**: 8.4%

### Pension Funds

- **790 bn €**
  - **Fossil fuels**: 5.5%
  - **CO₂-intensive**: 6.9%

#### Exposures (as a % of total assets)

- **Fossil fuels**: 48.9 EUR billion
- **Energy generation**: 12.0 EUR billion
- **Heavy industry**: 30.1 EUR billion
- **Transport**: 42.6 EUR billion
- **Agriculture**: 75.5 EUR billion

- **Fossil fuels**: 18.0 EUR billion
- **Energy generation**: 17.8 EUR billion
- **Heavy industry**: 10.1 EUR billion
- **Transport**: 8.3 EUR billion

Example of measuring transition risk exposure

**Real estate exposures**

<table>
<thead>
<tr>
<th>EUR billion</th>
<th>Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>864</td>
<td>77</td>
</tr>
<tr>
<td>694</td>
<td>54</td>
</tr>
<tr>
<td>170</td>
<td>23</td>
</tr>
<tr>
<td>23</td>
<td>67</td>
</tr>
</tbody>
</table>

**Energy label distribution commercial real estate**

<table>
<thead>
<tr>
<th>Energy label</th>
<th>Banks Sample size: EUR 28.4 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>A or higher</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
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<td>D</td>
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<td></td>
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<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
</tr>
</tbody>
</table>

Source: [DNB (2017)](https://www.dnb.nl), Waterproof: An Exploration of Climate Related-Risks for the Financial Sector
Important to take the unique context into account when assessing impacts

Examples of differences in ways that climate risks affect financial sectors in emerging markets

<table>
<thead>
<tr>
<th>Physical risks</th>
<th>Transition risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity of current and future impacts</td>
<td>Time horizons perceived differently</td>
</tr>
<tr>
<td>Lack of insurance</td>
<td>Channels could be very different</td>
</tr>
<tr>
<td>Sector concentration and structure</td>
<td>Environmental issues at the forefront</td>
</tr>
</tbody>
</table>
Challenge 2: beef up data collection and build tools to quantify risks

Improving information collection

- Granular geospatial exposure data
- Breakdowns in industry level data sets per asset class
- Information on green / brown assets based on taxonomies and labels
- Relevant credit metrics (terms, NPLs, POD and LGDs)

Introducing stress tests

- To quantify risks, macro-level stress test capacity can be developed
- For physical risks this exercise is more straightforward, and a likely starting point
- Defining transition scenario’s is a difficult process. Work by networks such as NGFS can help.

Source: DNB (2018). An Energy Transition Stress Test

Managing Climate Related Financial Risks
Challenge 3: integrating climate risks in sector guidance and supervisory approaches

Progress

- Numerous jurisdictions have introduced E&S guidance on risk management, governance and disclosure, including China, Brazil and Bangladesh

Climate risks

- Climate risks are often not part of such frameworks

Supervision

- To strengthen implementation of guidelines, further integration in supervisory practices, for example through onsite inspections, and supervisory scoring systems is key.
- Emerging discussions on how to better integrate climate risks under BASEL III
Challenge 4: the need for leadership and collaboration
Key global initiative: Network for Greening the Financial System

NGFS Recommendations

01 SUPERVISION
Integrating climate-related risks into financial stability monitoring and micro-supervision

02 PORTFOLIO MAN.
Integrating sustainability factors into own-portfolio management

03 DATA
Bridging the data gaps

04 AWARENESS
Building awareness and intellectual capacity and encouraging technical assistance and knowledge sharing

05 DISCLOSURE
Achieving robust and internationally consistent climate- and environment-related disclosure.

06 TAXONOMY
Supporting the development of a taxonomy of economic activities.

Complementary initiatives include:


Coalition for Ministers of Finance on Climate Action


Managing Climate Related Financial Risks
Key global initiative: FSB Task Force for Climate Related Financial Disclosures

Core Elements of Recommended Climate-Related Financial Disclosures

- **Governance**
  The organization’s governance around climate-related risks and opportunities

- **Strategy**
  The actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning

- **Risk Management**
  The processes used by the organization to identify, assess, and manage climate-related risks

- **Metrics and Targets**
  The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Source: [FSB TCFD](https://www.fsb-tcfd.org)
Key policy initiative: EU Action Plan on Sustainable Finance

EU Action Plan for Sustainable Finance

One comprehensive strategy | Three main objectives | Ten Actions

1. Reorienting capital flows towards sustainable investment
   - Establish EU Sustainable Taxonomy
   - Create Standards and Labels
   - Foster Investment in Sustainable Projects
   - Incorporate Sustainability in Investment Advice
   - Develop Sustainability Benchmarks

2. Mainstreaming Sustainability into risk Management
   - Integrate ESG in Ratings and Market Research
   - Clarify institutional investors and asset managers duties

3. Fostering transparency and Long-termism
   - Incorporate sustainability in prudential requirements
   - Strengthen Sustainability Disclosure & Accounting
   - Foster Sustainable Corporate Governance

Source: EU Action Plan on Sustainable Finance

Managing Climate Related Financial Risks
The World Bank has piloted climate risk and opportunity assessments in the FSAP, and is building capacity to support supervisors integrate climate risks.

**Climate Risk and Opportunity Assessments**

- Identifying **vulnerabilities**
- Assessing **supervisory responses**, for banking, insurance, pensions
- Identifying solutions to **deepen markets** for green growth

**Technical assistance**

- Environmental Risk Assessments
- Building tools
- Integration in supervision
Questions