CLIMATE CHANGE RISK: AWARENESS, MEASUREMENT, MANAGEMENT AND DISCLOSURE

4 APRIL 2019

Som-lok Leung, IACPM
Ilya Khaykin, Oliver Wyman
John Colas, Oliver Wyman

EBA & EBF Workshop on Sustainable Finance
Brussels
Our clients’ industries are extremely competitive, and the maintenance of confidentiality with respect to our clients’ plans and data is critical. Oliver Wyman rigorously applies internal confidentiality practices to protect the confidentiality of all client information.

Similarly, our industry is very competitive. We view our approaches and insights as proprietary and therefore look to our clients to protect our interests in our proposals, presentations, methodologies and analytical techniques. Under no circumstances should this material be shared with any third party without the prior written consent of Oliver Wyman.

© Oliver Wyman
Pressure has increased to mitigate climate risks and adapt to the new expected conditions

Example initiatives from policymakers, regulators, investors, and civil society

“In light of the growing pressures and the increasing recognition of the materiality, how should banks and credit risk teams address climate related risks?”

IACPM and Oliver Wyman launched an industry survey to explore climate risk awareness

Survey description

- Global survey
- 45 financial institutions including 4 development banks
- The survey covers
  - TCFD implementation (e.g. progress, plan, roadblocks)
  - Integration of climate change considerations into credit risk and opportunity assessment (scope, governance, process)

We will leverage the results from the survey throughout this presentation
In our view, effective management of climate change risks requires integration across elements of a firm’s risk framework.
Banks should develop capabilities to assess the impact of climate-related scenarios on credit losses

Does your institution perform climate scenario analysis and/or climate stress testing?

# of respondents

- Yes: 8
- No, but currently working on integration: 11
- No, but actively considering it: 18
- No: 7

About 25% of surveyed institutions are working on integrating climate scenario analysis, often after a piloting phase.

The most advanced institutions are already performing climate scenario analysis, though typically on a limited scope. Some perform a qualitative assessment.

- Institutions are starting to adjust their tools to capture climate risk.
- Many institutions are developing capabilities or plan to do so in the near future.
- Where performed, climate scenario analysis is not yet fully integrated into portfolio management and strategic planning.

Source: Oliver Wyman/IACPM Survey (November 2018)
We see assessment of long-term temperature based scenarios and event-based scenarios as informative analyses.

**Temperature-based scenarios**

- Holistic scenarios/cross-sector
- Often developed for policy purposes to describe a smooth transition, not a stress scenario
- Requires long-term modeling and assumptions
- Explicitly refers to the TCFD and the 2°C scenario

**Event-based scenarios**

- Scenarios focused on potential impact of one triggering event (e.g. carbon price regulation)
- Focus on understanding current portfolio exposure to the specific event – timing considered as “near-term” for simplification of analysis

The scenarios can be built based on existing climate scenario models.
Existing credit risk tools, credit ratings, credit data, and origination and review processes do not yet effectively incorporate climate risks

How are climate-related risks captured in the credit rating process?

# of respondents

- 2 explicitly captured in credit rating model as a variable
- 5 indirectly captured through related variables
- 17 qualitatively overridden on the rating
- 1 not explicitly captured
- 5 other

As part of the rating process, analysts can qualitatively override the rating in case they are not comfortable with the level of environmental and social risks.

Some institutions capture climate risk by adjusting the financials (e.g. additional CAPEX required for adaptation or transition).

- Some institutions are starting to capture climate-related risks within the credit rating process in an indirect and qualitative manner.
- Many institutions have not yet started the journey.

Source: Oliver Wyman/IACPM Survey (November 2018)
In our view this requires integration of climate risk with traditional financial credit analysis.

The next page shows an example of this in the oil and gas upstream sector.
Many banks are including climate considerations into limits and sector exclusion policy – though these are largely for reputational risk management rather than credit risk management.

Are climate-related issues explicitly considered when setting and monitoring limits (including exclusion of specific sectors such as coal mining)?

<table>
<thead>
<tr>
<th># of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes: 24</td>
</tr>
<tr>
<td>No, but currently working on integration: 1</td>
</tr>
<tr>
<td>No, but actively considering it: 9</td>
</tr>
<tr>
<td>No: 9</td>
</tr>
</tbody>
</table>

In most cases, limits are in the form of a ban or restrictions on the financing of certain activities such as coal mining and coal-fired power plants.

- Many institutions have already set climate-related limits.
- These limits are often in the form of a ban or restrictions on specific sectors.
- Evidence of more advanced climate-related limit systems, e.g. based on total portfolio emissions or climate stressed losses, are limited.

Source: Oliver Wyman/IACPM Survey (November 2018)
Some institutions are beginning to reflect climate risks in loan pricing

How do climate change considerations affect loan pricing? [several responses possible]

# of respondents

- Through the rating: 6
- Discount and/or premium based on ESG rating: 3
- Discount based on energy efficiency certificates (mortgage/real estate only): 1
- Pricing is not impacted: 11
- Other: 2

A few European institutions have started linking pricing to ESG rating

- Most institutions do not adjust pricing based on considerations related to climate change
- A few institutions have started linking pricing to ESG rating
  - Public examples of sustainability-linked loans include
    - ING/Philips
    - BNP Paribas/Danone
  - In these examples, the interest rate is directly dependent on the company’s sustainability performance and rating

Source: Oliver Wyman/IACPM Survey (November 2018)
We see eventual responsibility with credit risk teams as recognition of climate risk as a financial, not just reputational risk.

Ownership of climate scenario analysis/stress testing

- Currently, initial efforts are driven by Sustainability/Environmental and Social risk teams – often focusing on potential negative impacts of projects and reputational issues.
- Some institutions pointed out climate risk management should be owned by credit risk or stress testing teams in the future.

Source: Oliver Wyman/IACPM Survey (November 2018)
Banks should incorporate climate risk into risk appetite, consider limits and internal expectations for risk controls

Does your risk appetite statement explicitly cover climate-related risks?

# of respondents

- At this stage, few institutions explicitly incorporate climate risk into their risk appetite statement
- Regulators are starting to look for an articulation of climate risk in line with the risk appetite
  - “Evidence of how the firm monitors and manages the financial risks from climate change in line with its risk appetite statement” PRA

Source: Oliver Wyman/IACPM Survey (November 2018)
Appendix | Supporting materials
Financial institutions are also expected to disclose (2/2)
Implementing the TCFD recommendations is a multi-year journey

How long do you expect it to take for your company to complete its plans to implement the TCFD recommendations to the extent deemed appropriate (excluding ongoing activities)?
# of respondents, N = 39

At most institutions, the governance pillar is expected to be in place first; the other pillars will take more time and effort to implement

Source: Oliver Wyman/IACPM Survey (November 2018)
Where do you see your institution compared to peers when it comes to implementing the TCFD recommendations? [for each TCFD pillar]

# of respondents, Total = 38

Source: Oliver Wyman/IACPM Survey (November 2018)
This report is for the exclusive use of the Oliver Wyman client named herein. This report is not intended for general circulation or publication, nor is it to be reproduced, quoted or distributed for any purpose without the prior written permission of Oliver Wyman. There are no third party beneficiaries with respect to this report, and Oliver Wyman does not accept any liability to any third party.

Information furnished by others, upon which all or portions of this report are based, is believed to be reliable but has not been independently verified, unless otherwise expressly indicated. Public information and industry and statistical data are from sources we deem to be reliable; however, we make no representation as to the accuracy or completeness of such information. The findings contained in this report may contain predictions based on current data and historical trends. Any such predictions are subject to inherent risks and uncertainties. Oliver Wyman accepts no responsibility for actual results or future events.

The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligation is assumed to revise this report to reflect changes, events or conditions, which occur subsequent to the date hereof.

All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the client. This report does not represent investment advice nor does it provide an opinion regarding the fairness of any transaction to any and all parties.