Overview of presentation

- Climate change as a source of economic and financial risks
- Understanding the possible impacts of climate risks on the financial system
- Challenges for financial sector
- The frameworks for comparable disclosures – focus on TCFD
- NGFS objectives and recommendations
Climate change as a source of economic and financial risks

Climate change is one of many sources of structural change affecting the financial system ... but has distinctive characteristics:

- Far-reaching impact in breadth and magnitude
- Foreseeable nature
- Irreversibility
- Dependency on short-term actions
Channels of affecting financial stability

The transmission channels of climate change risk to the financial sector are by now commonly understood to comprise two main aspects:

- Physical risks
- Transition risks
Physical risks

**Physical impacts** include the economic costs and financial losses resulting from the increasing severity and frequency of extreme climate change-related weather events (such as heat waves, landslides, floods, wildfires and storms) as well as longer term progressive shifts of the climate (such as changes in precipitation, extreme weather variability, ocean acidification, and rising sea levels and average temperatures).
From physical risk to financial stability risks

Financial contagion (market losses, credit tightening) feeding back to the economy

Direct transmission channels

Economy
- Business disruption
- Capital scrapping
- Reconstruction and replacement
- Increase in commodity prices
- Migration

Lower residential property values
Lower commercial property values
Lower household wealth
Lower corporate profitability and increased litigation

Financial system
- Financial market losses (equities, bonds and commodities)
- Credit market losses (residential and corporate loans)
- Underwriting losses
- Operational risk (including liability risk)

Indirect transmission channels

Wider economic deterioration (lower demand, productivity and output) impacting financial conditions

Physical risk drivers
- Extreme weather events
- Gradual changes in climate
Transition risks

**Transition impacts** relate to the process of adjustment towards a low-carbon economy. Emissions must eventually reach “net zero” to prevent further climate change. The process of reducing emissions is likely to have significant impact on all sectors of the economy affecting financial assets values. While urgent action is desirable, an abrupt transition could also have an impact on financial stability and the economy more broadly.
From transition risk to financial stability risks

Financial contagion (market losses, credit tightening) feeding back to the economy

Economy
- Stranded assets (fossil fuels, real estate, infrastructure, vehicles)
- Reinvestment and replacement
- Increase in energy prices

Direct transmission channels
- Corporate assets devaluation
- Lower corporate profitability and increased litigation
- Lower residential property values
- Lower household wealth

Financial system
- Financial market losses (equities, bonds and commodities)
- Credit market losses (residential and corporate loans)

Indirect transmission channels
Wider economic deterioration (lower demand and output) impacting financial conditions

Transition risk drivers
- Climate policy
- Technology
- Consumer preferences
Physical versus transition risks: temperature scenarios and the cost of climate change

<table>
<thead>
<tr>
<th>Transition pathway</th>
<th>Strength of response (based on whether climate targets are met)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Met</td>
</tr>
<tr>
<td>Disorderly</td>
<td>Disorderly</td>
</tr>
<tr>
<td></td>
<td>Sudden and unanticipated response is disruptive but sufficient enough to meet climate goals</td>
</tr>
<tr>
<td>Orderly</td>
<td>Orderly</td>
</tr>
<tr>
<td></td>
<td>We start reducing emissions now in a measured way to meet climate goals</td>
</tr>
<tr>
<td></td>
<td>Not met</td>
</tr>
<tr>
<td>Disorderly</td>
<td>Too little, too late</td>
</tr>
<tr>
<td></td>
<td>We do not do enough to meet climate goals, the presence of physical risks spurs a disorderly transition</td>
</tr>
<tr>
<td>Orderly</td>
<td>Hot house world</td>
</tr>
<tr>
<td></td>
<td>We continue to increase emissions, doing very little, if anything, to avert the physical risks</td>
</tr>
</tbody>
</table>
General roles in financial market

- Central banks: macroprudential supervision (understanding the economics of climate change and its impacts on the financial system and financial stability)
- Supervisors: microprudential supervision (assessing/monitoring responses of an individual financial institution to exogenous risks)
- Regulators: adopting and implementing rules for financial institutions
- IFIs and development banks: promoting and facilitating green/sustainable finance
Challenges for financial sector (1/2)

- Not strong enough political willingness and leadership
- Lack of capacity: developing credible analyses on how environmental sources can create financial risks is complex and requires expertise
- Knowledge gaps: fragmented or absent policy signals are a major distraction from efforts to develop more holistic analysis of the risks that financial institutions are exposed to
Inadequate data: data is a critical input to risk analysis. The lack of comprehensive and consistent data can dissuade financial institutions from investing in methods and tools development.

While the need for financial sector adjustment as part of the climate challenge is widely acknowledged, key gaps remain in terms of measurement (methods, tools, etc).

Need to ensure of a level playing field: if underpriced a competitive market may force a ‘race to the bottom’ (e.g. greenwashing).
In 2015 the Financial Stability Board identified the need for better information to support informed investment, lending, and insurance underwriting decisions and improve understanding and analysis of climate-related risks.

As a result the Task Force on Climate-related Financial Disclosures (TCFD) was established to help identify the information needed by investors, lenders, and insurance underwriters to appropriately assess and price climate-related risks and opportunities.
In 2017 TCFD released its Recommendations on climate-related financial disclosures that are applicable to both non-financial and financial companies across industries and jurisdictions.

The Task Force structured its recommendations around four thematic areas that represent core elements of how companies operate: governance, strategy, risk management, and metrics and targets.
The four overarching recommendations are supported by 11 recommended disclosures that build out the framework with information that will help investors and others understand how reporting companies assess climate-related risks and opportunities.

A total of 785 organisations are now supporters of the TCFD, including the world’s largest banks, asset managers and pension funds, responsible for assets of $118 trillion.
<table>
<thead>
<tr>
<th>Recommendations and Supporting Recommended Disclosures</th>
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<tr>
<td><strong>Governance</strong></td>
</tr>
<tr>
<td>Disclose the organization’s governance around climate-related risks and opportunities.</td>
</tr>
<tr>
<td>a) Describe the board’s oversight of climate-related risks and opportunities.</td>
</tr>
<tr>
<td>b) Describe management’s role in assessing and managing climate-related risks and opportunities.</td>
</tr>
<tr>
<td>c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.</td>
</tr>
<tr>
<td>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</td>
</tr>
<tr>
<td>b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.</td>
</tr>
<tr>
<td>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.</td>
</tr>
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<td><strong>Risk Management</strong></td>
</tr>
<tr>
<td>Disclose how the organization identifies, assesses, and manages climate-related risks.</td>
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<tr>
<td>a) Describe the organization’s processes for identifying and assessing climate-related risks.</td>
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<tr>
<td>b) Describe the organization’s processes for managing climate-related risks.</td>
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<td>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.</td>
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<td><strong>Metrics and Targets</strong></td>
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<tr>
<td>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</td>
</tr>
<tr>
<td>a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</td>
</tr>
<tr>
<td>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</td>
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<td>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</td>
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NGFS: Context

- In December 2017, 8 central banks and supervisors established a Network of Central Banks and Supervisors for Greening the Financial System (NGFS).
- Since then, the NGFS has grown to 36 members and 6 Observers, representing 5 continents. More is expected!
- April 2019: first comprehensive report “A call for action” which proposes first recommendations aiming at facilitating the role of the financial sector in achieving the objectives of the 2015 Paris Agreement.
NGFS: members and observers
The Central Banks and Supervisors Network for Greening the Financial System (NGFS) is a group of Central Banks and Supervisors willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy. Its purpose is to define and promote best practices to be implemented within and outside of the Membership of the NGFS and to conduct or commission analytical work on green finance.

NGFS Charter, Article 1
Central Banks and Supervisors Roles

Under the auspices of the NGFS, a group of central banks, supervisors (members) and international organisations (observers) agreed in October 2018 that it is within the mandates of central banks and supervisors to ensure that the financial system is resilient to climate-related risks.
NGFS recommendations (1/2)

1: Integrating climate-related risks into financial stability monitoring and micro-supervision.

2: Integrating sustainability factors into own-portfolio management.

3: Bridging the data gaps.

4: Building awareness and intellectual capacity and encouraging technical assistance and knowledge sharing.
NGFS recommendations (2/2)

5: Achieving robust and internationally consistent climate and environment related disclosure.

6: Supporting the development of a taxonomy of economic activities.
NGFS – next steps (1/2)

NGFS is planning to develop:

- a handbook on climate and environment-related risk management for supervisory authorities and financial institutions;
- voluntary guidelines on scenario-based risk analysis;
- best practices for incorporating sustainability criteria into central banks’ portfolio management (particularly with regard to climate-friendly investments);
Moreover, NGFS is planning to:

- set up a joint working group with interested parties to bridge existing data gaps;
- develop training to equip employees with the necessary skills and knowledge;
- work closely together with academics and think-tanks to inform thinking;
Issues to Consider:

- Expectations for the financial system in the NDCs
- Ideas of engagement modalities for financial system in the NDCs definition and implementations
- Recommendations for the central banks and supervisors to increase pace and scale of change to bring NDCs in line with the Paris Agreement
- Emerging needs and suggested next steps/follow on actions