Climate change has significant financial impacts on asset valuation in the short and long term. There is mounting empirical evidence that climate change has financial implications on asset valuation in global markets across various asset classes. Therefore, asset managers must act now to identify and manage climate risks in their investment portfolios. Frequent and unpredictable climate events are causing adverse impacts on resource availability, manufacturing capacity, supply chains and business operations, which are affecting share prices of companies in the real economy. In the past year, a wide range of firms, including, an Australian dairy farm\(^1\), a Japanese car manufacturer\(^2\) and an American utility company\(^3\) have each experienced significant capital losses due to extreme events linked to climate change. Moreover, the first climate change related bankruptcy occurred in 2019, affecting over US$ 21 billion of debt and credit facilities.\(^4\)

In addition to the short term risks, the financial impact of climate change is compounded by longer term implications of the world economy aligning with the goals of the Paris Agreement. The agreement calls for the redirection of financial flows towards low greenhouse gas, and climate-resilient assets and strategies. This transition will render the business model and valuations of companies in high carbon sectors, such as oil & gas, invalid and leave investors with stranded assets.

What are the key climate risks?

The Task Force on Climate-related Financial Disclosure (TCFD) framework is currently widely adopted by regulators, corporations and financial institutions as a method for measuring and disclosing climate-related risks. One of the key merits of the TCFD framework is that it helps financial institutions to understand climate risks as it has defined and classified climate-related risks into the following two major risk categories with six sub categories: \(^6\)

### Physical Risks
- **Acute Risk**
  - Event-driven, extreme weather events; disruptions to operations, transportation, supply chains; damage to physical assets and impact on insurance liabilities
- **Chronic Risk**
  - Long-term shifts in climate patterns, (e.g. rising mean temperatures, water stress); degradation or limitations on resource availability (e.g. labour, natural resources)

### Transition Risks
- **Policy and Legal Risks**
  - Compliance costs; stranded assets; restrictions & limitations on carbon intensive assets; climate-related litigation claims
- **Technology Risk**
  - Write-offs on investment in disrupted technologies; required investment in new technologies; process change costs to accommodate new technologies
- **Market Risk**
  - Shifts in supply and demand for certain commodities and products; viability of certain business models; credit rating implications
- **Reputation Risk**
  - Damage to brand value or reputation resulting in lost revenue and additional expenditures (e.g. corporate affairs)

Are you ready to manage climate risks?

Asset managers will need to answer four fundamental questions when assessing the adequacy of their climate risk management process:

1. **Supervise -** Does your board and management committee have adequate oversight and accountability over your firm level and fund level climate risks?

2. **Identify and Assess -** Are there risk management processes in place for identifying and assessing the sector specific impact of climate risks on your investments?

3. **Monitor and Manage -** Do you have the right data and processes in place to measure your firm level and fund level exposures to climate risks?

4. **Disclose -** Are you able to explain these risks, and steps you have taken in managing climate risks to investors and regulators?

Processes used to manage climate risks

The SFC engaged PwC Hong Kong as a consultant to conduct a survey on integrating Environmental, Social, and Governance (ESG) factors and climate risks in asset management.\(^5\) The survey found that processes used to manage climate risks may involve:

- **senior management oversight** of climate risk assessment and management strategy;
- **climate risk assessment procedures** defined within the firm’s risk management policy;
- **incident monitoring mechanisms** which flag major climate change-related incidents;
- **the use of scenario analysis** according to TCFD to assess the potential financial implications of climate risks on investment portfolios; and
- **incorporating results from ongoing climate risk assessments** in the development of the firm’s investment strategies.

Asset management firms should have a clear understanding of how environmental and climate risks affect their portfolios before prematurely concluding that these risks are not financially material."
Managing Climate Risks: An imperative for Asset Managers

Implications of integrating climate risk into your risk management framework
The impact of integrating climate risk into the risk management framework will be relatively broad, involving multiple functions within an asset manager’s operating model. The illustration below details the specific impact of integrating climate risks in an asset manager’s risk management framework.

How PwC can support you in your climate risk management journey
There is growing evidence that environmental factors, especially those related to climate change, and financial performance are linked. Consequently, integrating climate risks in your risk management framework is crucial to your strategic agenda. Here is how PwC can assist you in developing and assessing the adequacy of your climate risk management processes.

Govenance & Supervision
- Gap analysis of governance framework in place for managing climate risks, including insights on industry best practices
- Board and senior management training on climate risks and related governance processes

Identify & Assess
- Investment portfolio level and fund level assessments:
  - Exposures to material climate risk factors using agreed-upon benchmark (SASB, EU Taxonomy)
  - Carbon intensity calculations
  - Quantify investments in climate positive sectors
- Climate scenario modelling and risk assessments

Monitor & Manage
- Review of the end-to-end climate risk management framework (i.e. from setting of risk appetite to establishing controls and limits)
- Review current climate risk mitigation measures and advise on enhancements
- Assurance over climate risk related metrics

Disclose
- Gap analysis on TCFD readiness (i.e. assessment and alignment with TCFD recommendations)
- Benchmarking of disclosures against peers and best practices
- Assurance on climate risks related datapoints for disclosure

Areas of impact:
1. Establish board oversight of climate risk appetite & strategy
2. Design risks limits for monitoring and managing climate risks
3. Adhere to climate risk specific requirements set out within Investor mandates
4. Assess potential investments according to material climate risk exposures in the short, medium and long term
5. Develop climate risk scenario analysis capabilities
6. Review the control design and effectiveness of the climate risk management process
7. Incorporate climate risks related disclosures in client reporting

Do you want to understand further on how to manage your climate risks? Contact us and learn more.

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