

Table 1

Examples of Climate-Related Risks and Potential Financial Impacts

| Type | Climate-Related Risks ³² | Potential Financial Impacts |
|--|--|--|
| A Introduction | Policy and Legal | |
| | <ul style="list-style-type: none"> – Increased pricing of GHG emissions – Enhanced emissions-reporting obligations – Mandates on and regulation of existing products and services – Exposure to litigation | <ul style="list-style-type: none"> – Increased operating costs (e.g., higher compliance costs, increased insurance premiums) – Write-offs, asset impairment, and early retirement of existing assets due to policy changes – Increased costs and/or reduced demand for products and services resulting from fines and judgments |
| | Technology | |
| | <ul style="list-style-type: none"> – Substitution of existing products and services with lower emissions options – Unsuccessful investment in new technologies – Costs to transition to lower emissions technology | <ul style="list-style-type: none"> – Write-offs and early retirement of existing assets – Reduced demand for products and services – Research and development (R&D) expenditures in new and alternative technologies – Capital investments in technology development – Costs to adopt/deploy new practices and processes |
| | Market | |
| | <ul style="list-style-type: none"> – Changing customer behavior – Uncertainty in market signals – Increased cost of raw materials | <ul style="list-style-type: none"> – Reduced demand for goods and services due to shift in consumer preferences – Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment) – Abrupt and unexpected shifts in energy costs – Change in revenue mix and sources, resulting in decreased revenues – Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations) |
| B Climate-Related Risks, Opportunities, and Financial Impacts | Reputation | |
| | <ul style="list-style-type: none"> – Shifts in consumer preferences – Stigmatization of sector – Increased stakeholder concern or negative stakeholder feedback | <ul style="list-style-type: none"> – Reduced revenue from decreased demand for goods/services – Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions) – Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention) – Reduction in capital availability |
| | Acute | |
| | <ul style="list-style-type: none"> – Increased severity of extreme weather events such as cyclones and floods | <ul style="list-style-type: none"> – Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions) – Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism) – Write-offs and early retirement of existing assets (e.g., damage to property and assets in “high-risk” locations) |
| | Chronic | |
| | <ul style="list-style-type: none"> – Changes in precipitation patterns and extreme variability in weather patterns – Rising mean temperatures – Rising sea levels | <ul style="list-style-type: none"> – Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants) – Increased capital costs (e.g., damage to facilities) – Reduced revenues from lower sales/output – Increased insurance premiums and potential for reduced availability of insurance on assets in “high-risk” locations |
| C Recommendations and Guidance | | |
| D Scenario Analysis and Climate-Related Issues | | |
| E Key Issues Considered and Areas for Further Work | | |
| F Conclusion | | |
| Appendices | | |

³² The sub-category risks described under each major category are not mutually exclusive, and some overlap exists.

Table 2

Examples of Climate-Related Opportunities and Potential Financial Impacts

| Type | Climate-Related Opportunities ³³ | Potential Financial Impacts |
|-----------------------|--|---|
| Resource Efficiency | <ul style="list-style-type: none"> – Use of more efficient modes of transport – Use of more efficient production and distribution processes – Use of recycling – Move to more efficient buildings – Reduced water usage and consumption | <ul style="list-style-type: none"> – Reduced operating costs (e.g., through efficiency gains and cost reductions) – Increased production capacity, resulting in increased revenues – Increased value of fixed assets (e.g., highly rated energy-efficient buildings) – Benefits to workforce management and planning (e.g., improved health and safety, employee satisfaction) resulting in lower costs |
| Energy Source | <ul style="list-style-type: none"> – Use of lower-emission sources of energy – Use of supportive policy incentives – Use of new technologies – Participation in carbon market – Shift toward decentralized energy generation | <ul style="list-style-type: none"> – Reduced operational costs (e.g., through use of lowest cost abatement) – Reduced exposure to future fossil fuel price increases – Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon – Returns on investment in low-emission technology – Increased capital availability (e.g., as more investors favor lower-emissions producers) – Reputational benefits resulting in increased demand for goods/services |
| Products and Services | <ul style="list-style-type: none"> – Development and/or expansion of low emission goods and services – Development of climate adaptation and insurance risk solutions – Development of new products or services through R&D and innovation – Ability to diversify business activities – Shift in consumer preferences | <ul style="list-style-type: none"> – Increased revenue through demand for lower emissions products and services – Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services) – Better competitive position to reflect shifting consumer preferences, resulting in increased revenues |
| Markets | <ul style="list-style-type: none"> – Access to new markets – Use of public-sector incentives – Access to new assets and locations needing insurance coverage | <ul style="list-style-type: none"> – Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks) – Increased diversification of financial assets (e.g., green bonds and infrastructure) |
| Resilience | <ul style="list-style-type: none"> – Participation in renewable energy programs and adoption of energy-efficiency measures – Resource substitutes/diversification | <ul style="list-style-type: none"> – Increased market valuation through resilience planning (e.g., infrastructure, land, buildings) – Increased reliability of supply chain and ability to operate under various conditions – Increased revenue through new products and services related to ensuring resiliency |

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Appendices

³³ The opportunity categories are not mutually exclusive, and some overlap exists.