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**Top-Down**

Themes identified through annual Secular Forum process
- Climate Change
- Geopolitics
- Corporate Governance
- Inequality
- Demographics Trends
- Cybersecurity

Specialty desks, credit analysts, security selection

Understanding all material risks is critical to making sound investment decisions, for example:
- Environment
  - Employs resource efficiency, from waste to energy consumption
- Social
  - Ensures sound product safety and quality standards to protect end-users
- Governance
  - Management’s capacity to manage risk over the cycle

**Bottom-Up**

Image 2

<table>
<thead>
<tr>
<th>Transition Risk</th>
<th>Physical Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples</strong></td>
<td></td>
</tr>
<tr>
<td>Carbon regulations (e.g., tax or cap and trade systems), energy-related technology changes (e.g., risk of low-carbon sources of energy such as renewables), shifting customer preferences, liability (e.g., litigation against governments and companies due to lack of action)</td>
<td>Acute physical risks (e.g., increased severity of extreme weather events, such as cyclones and floods), chronic physical risks (e.g., changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures and sea levels), air pollution, water stress, forest and land degradation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corporates</th>
<th>Sovereign</th>
<th>Municipals</th>
<th>Mortgage and Asset-backed securities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autos, Energy, Coal mining</td>
<td>Fossil fuels-exporting and energy-intensive sovereigns, depending on their fiscal positions and savings</td>
<td>Coal-fired generation among utilities</td>
<td>ABS: Aircraft, auto loans, leases affected by carbon regulations; MBS: ‘Brown’ assets lacking compliance with energy efficiency and environmental standard</td>
</tr>
<tr>
<td>Insurance P&amp;C, Utilities, Refining</td>
<td>Developing countries, especially those that are tiny and lacking diversification</td>
<td>Significant risks of water shortages for U.S. water utilities connected with regional and local governments</td>
<td>MBS: Holders of residuals or mortgage servicing rights, mostly on the private side; activities with concentrated exposure to specific geographies, such as commercial real estate lending</td>
</tr>
</tbody>
</table>

SOURCE: PMCD, Moody’s, Task Force on Climate-related Financial Disclosures (TCFD), For Illustrative purposes only