

Assessing the Impact of Climate Change in the Rating Process

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Agenda

- Assessing the Impact of Climate Change in the Rating Process:
 - Financial Services
 - Sovereigns
 - Corporates
- S&P Proposed Green Bond Evaluation

How Climate Change Can Impact Financial Services

- Direct financial impact unlikely to be material in the short term.
- Reputational, regulatory, and litigation risks may represent greater threats
- The most material impact is likely to come from a macroeconomic shock triggered by a climate change driver
- If authorities delay taking the necessary policy steps the negative long-term effects could be profound
- But climate change also offers opportunities

G20 Financial Systems' Relative Exposure To Climate Change Risk

Our combined ranking incorporates an assessment of:

- The economy's reliance on fossil fuels;
- The government's commitment to encouraging decarbonization through policy initiatives;
- The attractiveness of low-carbon investments; and
- The country's exposure to climate risk.

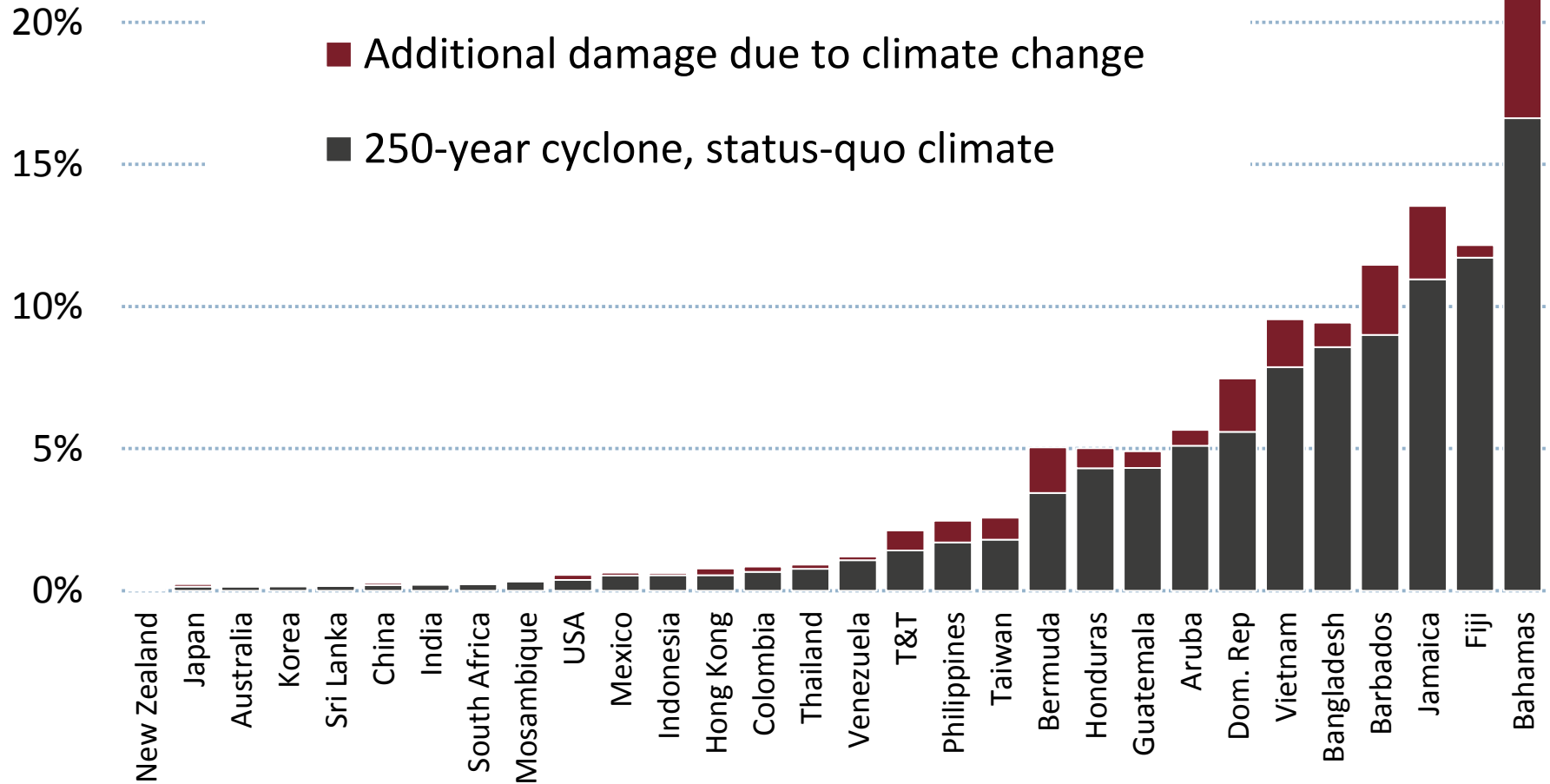
G20 Financial Systems' Exposure To Climate Change Risk: Strongest To Weakest					
	Carbon Intensity	Climate Policy	Green Investment Attractiveness	Climate Risk Exposure	Overall Score
France	2.7	2.5	2.0	3.0	2.6
Germany	3.3	2.5	2.0	2.0	2.6
U.K.	3.3	2.5	2.0	2.0	2.6
U.S	3.8	2.5	3.0	2.0	2.9
Brazil	2.0	3.0	4.0	4.0	3.0
Italy	2.7	3.5	3.0	3.0	3.1
Mexico	2.8	2.5	4.0	4.0	3.1
Canada	3.2	4.0	3.0	2.0	3.2
India	3.2	2.5	3.0	5.0	3.2
Indonesia	2.7	3.5	4.0	4.0	3.4
China	4.2	2.5	3.0	4.0	3.4
Argentina	3.0	4.0	4.0	4.0	3.7
Korea	4.2	4.0	3.0	3.0	3.7
Japan	3.8	4.5	3.0	3.0	3.8
Australia	4.5	4.5	3.0	2.0	3.8
Russia	4.0	3.5	5.0	3.0	3.8
South Africa	4.3	3.5	4.0	4.0	3.9
Turkey	3.2	4.5	5.0	4.0	4.1
Saudi Arabia	4.0	4.5	5.0	4.0	4.3

“The Heat Is On: How Climate Change Can Impact Sovereign Ratings”

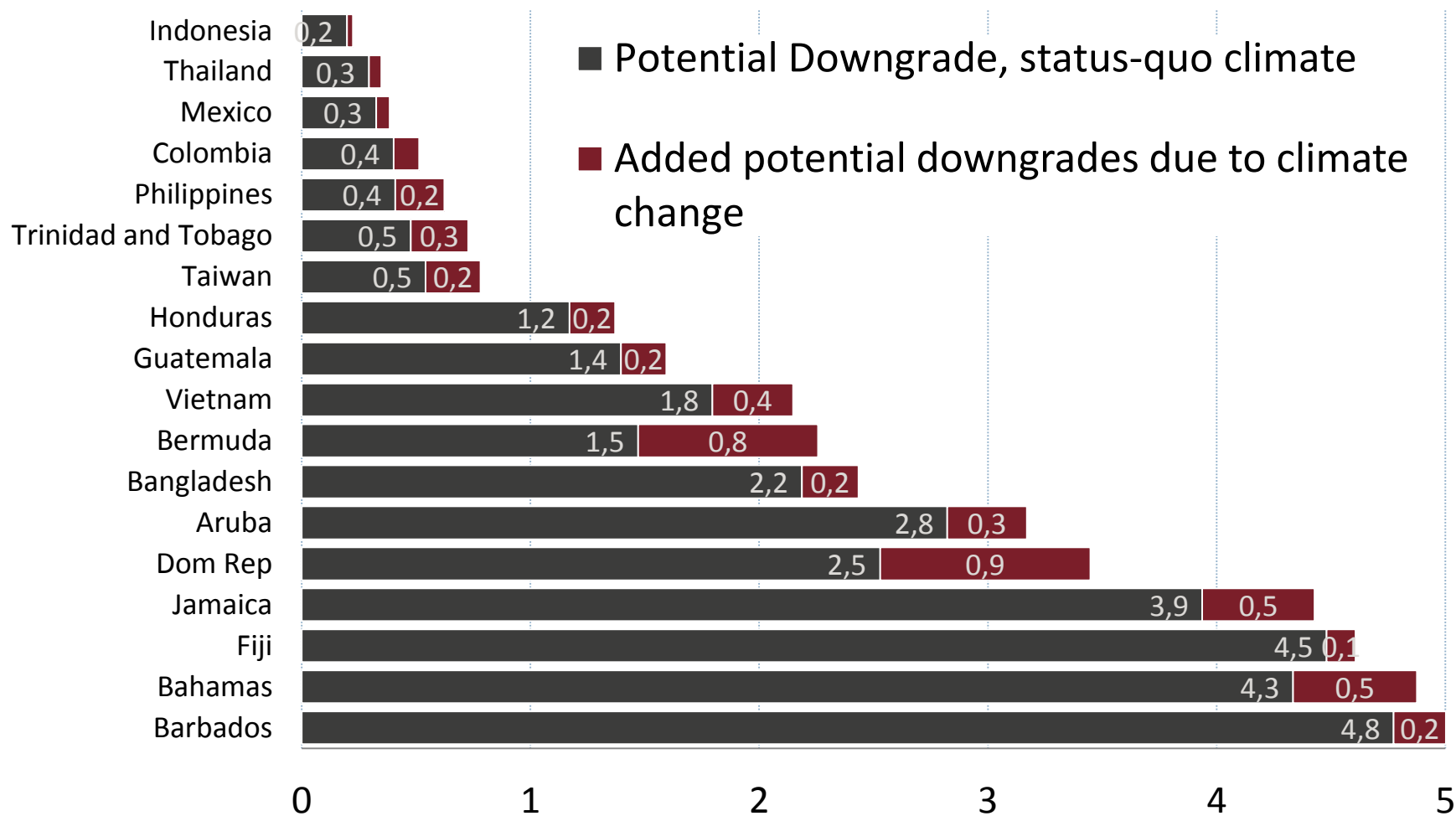
- **Partial** analysis of economic and ratings consequences of climate change by 2050.
- Focus on natural disasters (1 in 250 years tropical storms or floods).
- Does **not** assess other climate change risks (droughts, migration).
- Limited to 38 sovereigns globally.

Damage ratios tropical cyclones

(% of economic values/properties in country)



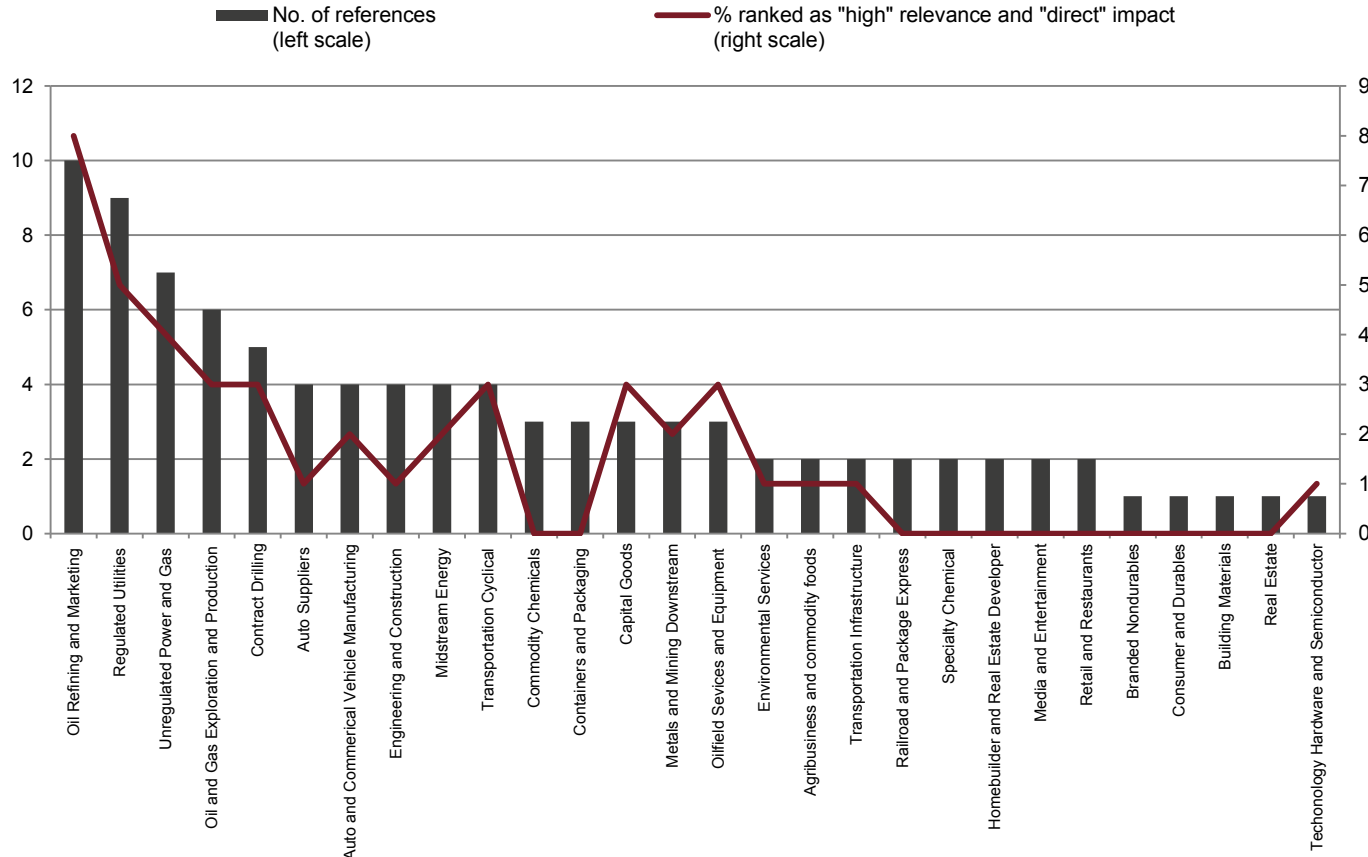
Potential Sovereign Rating Downgrades (in notches)



How Environmental and Climate Risks Factor into Global Corporate Ratings

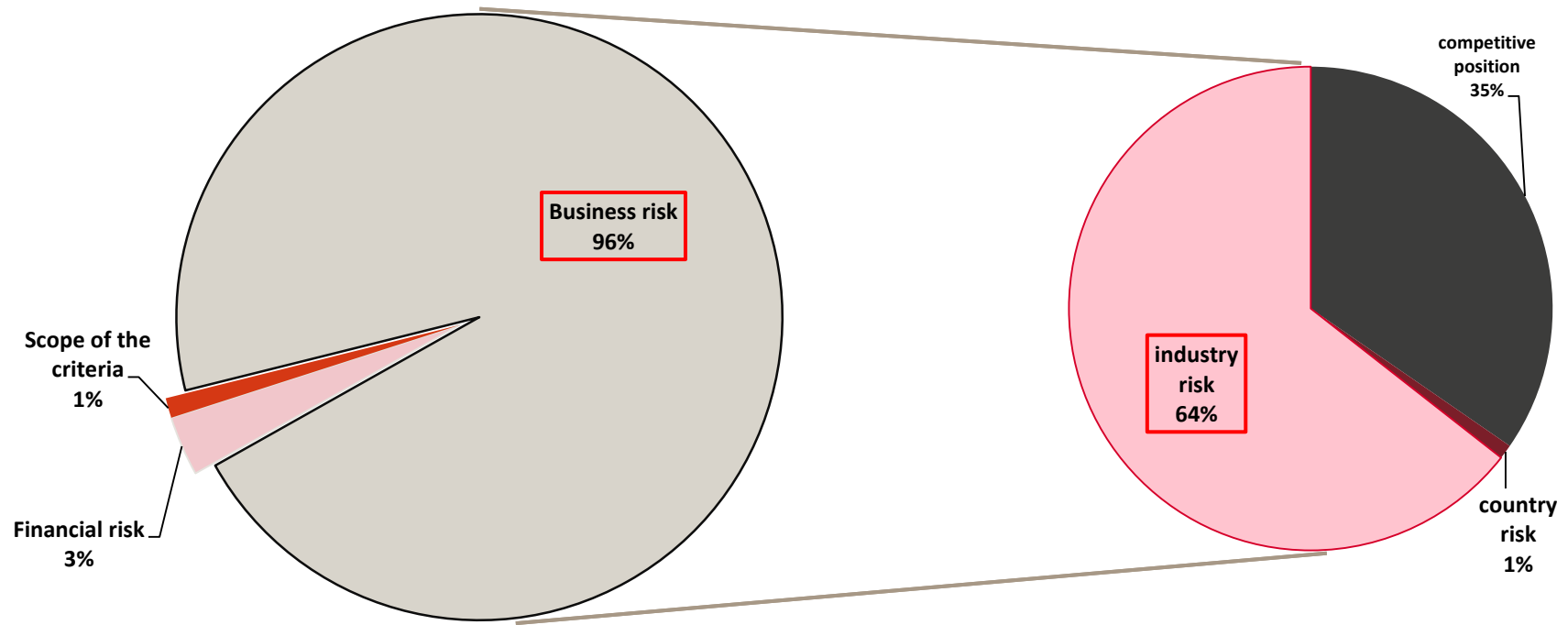
E&C risk embedded in corporate methodology

Number Of E&C Criteria References And Their Impact And Relevance Per Industry



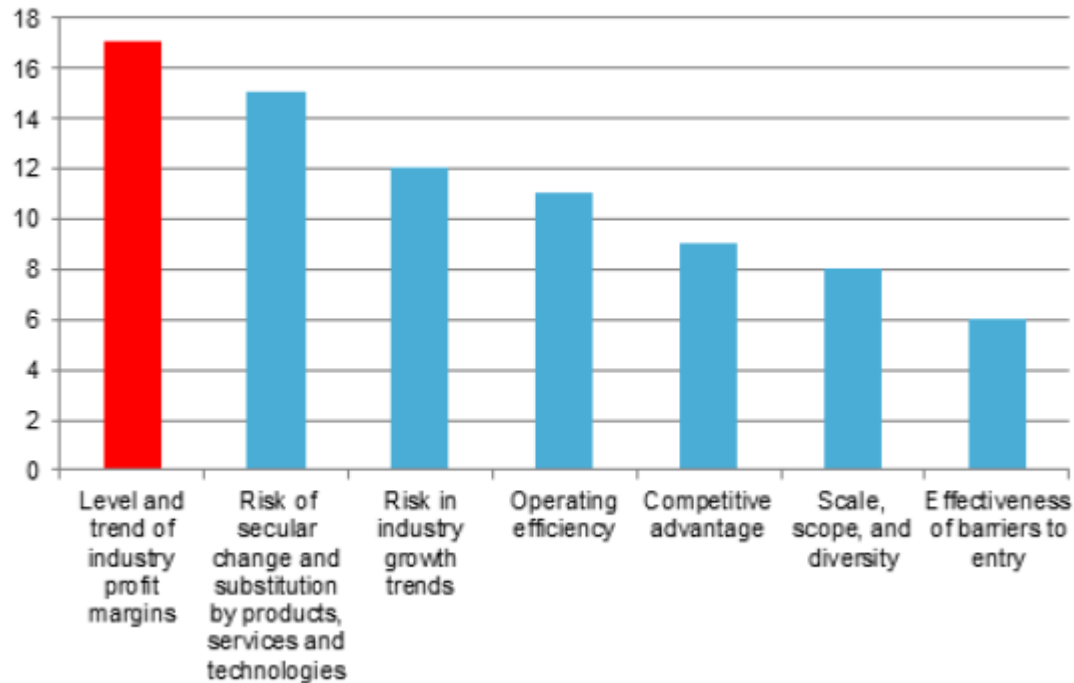
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E&C risk embedded in corporate methodology



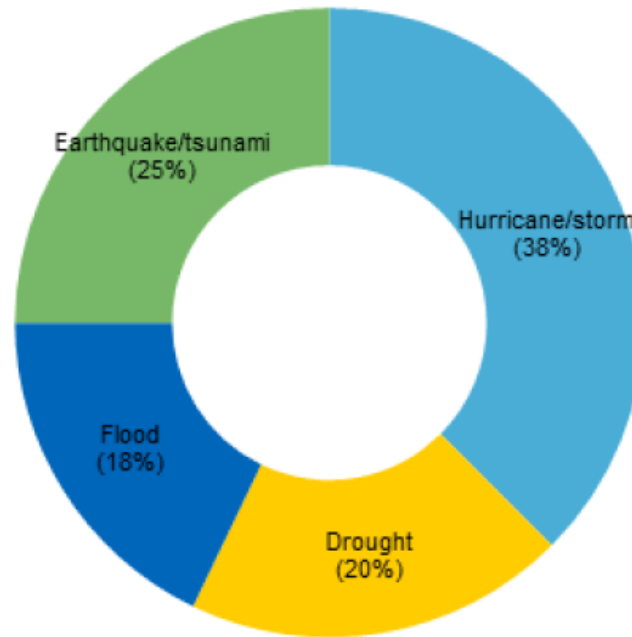
E&C risk related references, such as weather, emissions, natural disaster etc. are predominantly located in corporate Business Risk Profile (96%), among which industry risk (64%) and competitive position (35%) are most affected.

References Per Business Risk Determinants – Subsection



Climate Change Will Likely Test The Resilience Of Corporates' Creditworthiness To Natural Catastrophes

Rating Actions By Peril 2005-2015



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S&P Green Bond Evaluation

Goes beyond existing assessment tools and takes a local, sector specific view

- Draws on, but not limited to, green bond principles and existing taxonomies
- Includes analysis of governance and use of proceeds
- Focus on both adaptation and mitigation
- Evaluation of projects' lifecycle impacts.
- Based on local conditions baseline
- Within sector/technology, looks to identify and rank relative to best in class
- Establishes a hierarchy across technologies depending on their contribution to the green transition
- Scores and weights individual component scores in a transparent manner

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