Current issues

Emissions metrics may not be capturing your climate risks

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Asset owners assessing climate risk in their portfolios often use metrics such as Weighted Average Carbon Intensity (WACI), carbon footprint, or implied portfolio temperature. Such metrics are typically calculated based on the reported or estimated greenhouse gases (GHGs) emitted by each company in the portfolio. However, while the amount of GHG emissions may be a readily calculable and important metric, it is an imperfect measure of the climate risk to which the portfolio may be exposed.

Climate risk refers to the physical, transition and litigation risks that are likely to arise from climate change, which in turn depend on the future global policy pathways. While policy change should force a reduction in carbon emissions, how this translates into financial risk for investors is uncertain and not directly measurable simply by looking at headline emissions statistics. We consider an example of this below.

Example: fossil fuel co vs trucking co

Company A is a small fossil fuel driven power company

Company B is a substantial trucking company

If we assume that both companies A and B have the same GHG emissions, further consideration of these two companies would conclude that they do not have the same transition risks. In particular, companies A and B differ in terms of how core GHG emissions are to their business models.

Company A, the fossil fuel company, will likely incur substantially greater transition costs to substitute fossil fuel power generation for (say) solar or wind power generation. The assets which drive company A's success (plant, staff skills, etc.) are largely unhelpful for comparable low-carbon power generation. While company A could sell its operating assets, it is still faced with the need to wholly change its processes; any purchaser of the assets would be subject to, and would have to price in, the substantial transition risk.

For the trucking company, by contrast, the act of substituting combustion engines with electric vehicles constitutes no fundamental shift in its operating processes. As far as the staff are concerned, the change is relatively minor. Furthermore, where regulators can enable a smooth transition for an industry, it seems likely that they will try. There are ways of imposing a relatively painless transition on the trucking company (e.g. insist on a transition to electric vehicles, but only when the current vehicles reach the natural end of their lives).

The example illustrates the clear difference in transition risk between the two companies, which would be masked by just focusing on carbon emissions metrics, emphasising the need for asset owners to incorporate other climate related metrics in their analysis of portfolio risks. For example, consideration can be given to metrics such as a company's carbon risk rating, transition score and management's response to addressing climate risk considerations.

Approaches to quantifying climate risk, such as implied temperature increase and climate VaR, may add some value for asset owners seeking to quantify the financial risk arising from climate risk, but these need to be treated with caution. Underlying assumptions and methodologies may not be transparent, and the extent to which climate risk measurements may be misaligned with the underlying risks is likely harder to discern.

In building an approach to measuring and monitoring climate risk, we therefore recommend the following steps:

1. **Clearly define your goals**
    - Asset owners may have goals with a risk management focus: "Climate risk may cause assets to lose value and we want to protect the asset portfolio from that risk".
    - Asset owners may also have sustainable or impact type goals: "We want country X to be better prepared to mitigate climate risks, leading to minimal flood-related deaths in scenarios of such-and-such severity".
    - It is widespread for people to confuse these two types of goal. It is difficult to attain a goal if the goal is unclear.
2. **Put together a scorecard of metrics**
    - Explore climate risk considerations through multiple lenses to get a more nuanced picture of climate risk. Having a dashboard of metrics will allow better management of climate risks.
    - Choose metrics which are aligned with your goals. For example, if your goals are risk management goals, then your metrics should reference or seek to proxy physical, transition and litigation risks as far as possible.
    - Choose metrics which are readily calculable. The ideal metrics, given your goals, may simply not be available. Where the desired data isn't available, you could track data availability/quality as a metric in its own right.
3. **Train relevant board members and staff**
    - Training for your board members and staff needs to not only clarify how the metrics are put together, but also clarify the ways in which the metrics are imperfect.

How Hymans Robertson can support you

Hymans Robertson has a wealth of experience assisting financial firms, insurers and pension funds with their climate-related disclosures and risk management. We are happy to discuss any aspect of climate change and climate-related financial disclosures with you.

If you would like to discuss with one of our specialists, please get in touch.