DPAM
DEGROOF PETERCAM ASSET MANAGEMENT

# COP26: SEEING THROUGH THE CLIMATE SMOG: **WHY INVESTORS CARE FOR A CLEAR COP26 OUTCOME**

***For the first time ever, this year's Nobel Prize in Physics was awarded to Climate Scientists. Syokuro Manabe (JP) and Klaus Hasselmann (DE) won the price for their work on climate modelling and complex systems. Moreover, their research inherently contributed to both the accuracy and credibility of the Intergovernmental Panel on Climate Change's (IPCC) assessment reports. But how does this news relate to investor activities? And is the modelling in the IPCC's 6th assessment report sufficiently clear for financial market players to manage and mitigate future climate-related risks? COP26 will hopefully bring us some much-needed answers.***

## ASSESSING CLIMATE RISKS: THE CONCEPT OF SCENARIO ANALYSIS

It has been over four years ago since the Task force on Climate-related Financial Disclosures (TCFD) released its final recommendations for reports on climate-related financial information. Ever since then, significant disclosure progress has been made by corporates, who often rely on the 'TCFD framework' to structure their climate-related financial disclosures. **The framework focuses on 4 pillars: 'governance', 'strategy', 'risk management' and 'metrics & targets'**. But despite significant progress, the strategic pillar remains one of the more challenging and complex parts of the recommendations. Although « scenario analysis » and « stress testing »[1] are well known concepts within the wider financial stakeholder community, integrating them into investment activities is quite challenging due to the uncertainties built around both climate-related physical and transition risks.

Although the benefits of (climate) scenario analysis are clear (i.e. inform strategic management and contribute to strategy resilience in low- or high carbon scenarios), choosing the right scope, time frames, assumptions and parameters to identify plausible futures (and their consequences) is tricky to say the least. Let's have a look at some of the key variables:

- **Time horizon**: climate impact (transition or physical) varies over time. Whereas choosing short-term scenarios might hamper differentiation, long-term scenarios might be overwhelming due to the high level of uncertainties. Hence, for investors it can be useful to select time horizons linked to relevant policy deadlines, corporate capital, investment planning or estimated 'global peak emissions'. This usually means choosing a short term (2025), midterm (2030) and long term (2040-2050) scenario.

- **Risk types**: a wide variety of transition and physical climate risks threaten investments. Depending on the selected scenario, the materiality of those risks can vary significantly. One of the more straightforward transition risks to consider is carbon pricing, due to the financial quantification, the tangible impact and the likely future volatility due to regulatory actions and commitments (e.g. regulators increasing the scope of corporates subject to the carbon pricing mechanism). Technological breakthroughs are another form of transition risk, and often more difficult to quantify (i.e. the financial impact and pace of future evolution).

- **Global warming/carbon emissions**: an indicator required for every climate scenario. However, to remain feasible for investors, only a limited number of emissions or temperature scenarios can be

[1] Note that these do not imply the same approaches. While scenario analysis focuses on possible future environments (plural), stress testing is a projection of the future financial condition under a specific set of severely adverse conditions.

selected (note that the IPCC compiled a database of over 400 scenarios with different temperature outcomes depending on the peak emissions/year). Hence, the following (long-term!) global warming scenarios are generally selected by investors:

- a low ambition or business as usual scenario, i.e. > 4°C by 2100;
- a moderate ambition or mitigation scenario, i.e. likely > 2°C by 2100;
- a strong ambition or mitigation scenario, i.e. more likely than not > 2°C by 2100; and,
- a very high ambition or aggressive mitigation scenario, i.e. < 2°C by 2100.

## SEARCHING FOR PLAUSIBLE SCENARIOS

With greenhouse gases inherently impacting global warming, multiple temperature scenarios are plausible depending on the amounts emitted. This will ultimately result in different physical climate risk outcomes (think of flooding, wildfires, droughts, etc.).

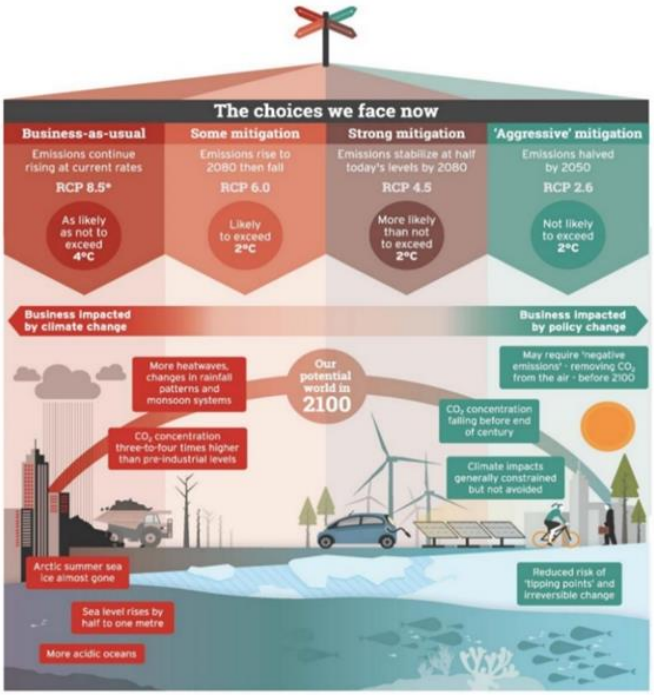


*Figure 1: scenario analysis (source: TCFD)*

But **why does policymaking matter in defining plausible climate scenarios?** On the one hand, ambitious and aggressive policy actions (as seen on the right-hand side of figure 1) will limit emissions, leading to a low global warming scenario and lower physical impacts. But while it limits the physical risks, such a scenario creates significant transition risks for high emitting industries. **Governments will strengthen carbon pricing mechanism or fund low-carbon industries**. A business-as-usual scenario on the other hand (as seen on the left-hand side of the figure), is characterised by limited governmental ambition and will lead to ahigh global warming scenarios due to elevated emissions quantities, ultimately leading to disastrous physical consequences (but also negatively impacting low-carbon solution providers).

Both extreme scenarios will impact our economy in different ways, requiring investors to either choose sides or diversify. Furthermore, note that these are only two (generic) scenarios. Numerous other plausible scenarios fall somewhere in between, such as the low ambition/some mitigation and strong mitigation scenarios shown in the figure above. But even when focusing on a single temperature scenario or outcome, **multiple emission pathway scenarios can occur, as these are driven by the speed of societal actions** (policy actions, corporate ambitions, technological breakthroughs, consumer preferences/decisions, etc.). Note that several reference scenarios have been developed by leading organizations, such as the International Energy Agency, PCC, Greenpeace, Bloomberg New Energy Finance, etc.

All these variables (i.e. emissions quantities, temperature increases, peak emissions, financial quantification, physical impacts and policy decisions) influence the way scenario analysis or stress testing can be conducted. But one thing is clear, it all starts with **estimates on global GHG emissions and the (allowed) carbon budget**. Hence, insights into governmental ambitions and governmental decision making are strongly tied to investors' climate scenario analysis and decision making.

## HOPES UP FOR COP26

*What is needed for better scenario analysis?*
To facilitate the process of scenario analysis or stress testing, investors need a clear outcomes and accelerated decision making at COP26, i.e. clear and ambitious Nationally Determined Contributions reflecting the remaining carbon budget allowing to have better insights in the emissions and temperature trajectories. But also standardization of international carbon pricing mechanisms are needed These will serve as valuable input for strategic decision making and climate risk management.

*What is DPAM expecting?*
Given the global nature of climate change, we ideally hope for alignment between (and consensus among) members, avoidance of different policy scenarios and scattered ambitions. But it goes beyond consensus. Global warming ultimately depends on the 'allowed' global carbon budget. Hence, as a sustainable and responsible investor, DPAM is hoping the above-mentioned consensus will be aligned with revised, more ambitious and fair Nationally Determined Contributions (the allowed 'cap') in line with the IPCC findings and recommendations. Global consensus on climate ambitions will allow us to limit the scope of the selected scenarios to those aligned with 1.5°C global warming.

*Challenges will remain!*
But let's make it clear: even in the most optimistic, positive COP26 outcome (i.e. 1.5°C alignment through global consensus) climate scenario analysis and stress testing will remain a highly-challenging processes, given the uncertainty related to climate (physical) outcomes and the speed/pace of the transition.

## GOVERNMENTAL WATCHDOGS: ACTIONS BY ECB AND FED

The **European Central Bank (ECB)** prepared an economy-wide climate stress test under three different climate policy scenarios. Over 4 million corporates were subject to the test, next to roughly 1600 EUR area banks. Part of a larger climate roadmap, the results and methodology will eventually inform the scheduled 2022 supervisory climate stress test for banks, for which the ECB released the methodology on October 18. With tangible COP26 outcomes, the ECB's stress testing exercise will also improve.

On the other side of the pond, the **Federal Reserve Bank of New York** is also working on a stress tests for large banks, assessing their resilience to climate-related risks. The test assesses the expected capital shortfall of financial institutions in certain climate stress scenarios, mainly focusing on fossil fuel exposure.

**Zooming in: climate scenario analysis at DPAM**
Our annual TCFD report provides an overview of all climate-related actions DPAM has taken within its investment decisions. In short on the strategic side, DPAM is taking following actions:

- Bottom-up: within our research activities, scenario analysis is implemented at investee level via **corporate carbon pricing risk scenarios** (different time horizons, different pricing assumptions), while exploring **climate-adjusted credit rating solutions**.

- Top-down: at DPAM level, we are performing climate-specific **asset allocation monitoring and review** via an in-house TCFD dashboard, including both transition and physical risk indicators.
- Stress testing: we evaluate several statistically defined possibilities to determine the most damaging combination of events (and their subsequent losses). The tests will be guided by the results of our scenario analysis monitoring and review process.

- For more information on what we are doing, please consult our 2020 TCFD report through the following link. The next report, detailing our activities for 2021, will be published at the end of the first quarter of 2022.

- To conclude, we should stress that several countries and regulators around the world are looking at **mandatory reporting on scenario analysis**. Until then, DPAM is continuing its work to build out a profound and thorough methodology for climate scenario analysis. To be continued.