

Climate stress test and net zero valuation

The 2023 Report on Financial Valuation published by the MIT Joint Program on the Science and Policy of Global Change aims to link long-term climate scenarios to company-specific valuation metrics, focusing on high emitting companies.

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Despite the polarization of attitudes towards ESG, most prominent net zero initiatives for investors - such as the NZAOA¹ and the IIGCC² - are gradually increasing their coverage in terms of members, asset classes and methodologies. In 2024, these initiatives have released important updates - through the NZIF 2.0 and the TSP4 - shifting the focus from using financed emissions as the sole metric for portfolio decarbonization to more comprehensive 'dashboard-style' approaches leveraging on various climate metrics. The opposing forces between absolute CO₂ emissions reaching an all time high at 37.4 billion tonnes (Gt) in 2023³ on the one hand, and net zero objectives of investors implying to reduce financed emissions on the other, have highlighted the need to accelerate the transition of high emitting sectors.

Transition finance and advanced metrics

Providing capital to high-emitting companies requires careful assessment to protect investors from both climate and controversy risk, such as greenwashing. While traditional metrics, like Scope 1 and 2 emissions (which measure direct emissions and emissions from energy consumption), offer a basic

starting point, more sophisticated metrics are needed. Advanced tools go beyond current emissions data and are considering forward looking views such as decarbonization pathways, capital expenditures, or climate stress tests.

Our organization and the MIT Joint Program on the Science and Policy of Global Change, have published a research paper⁴ providing important insights on the potential impact of transition risk on energy-intensive companies' valuation.

Building on the work of the Network for Greening the Financial System (NGFS), this methodology connects long-term climate scenarios to accounting, allowing investors to quantify the impact of different scenarios on company-level cash flows, earnings, and borrowing costs (see Figure 1). This model assesses how transition risks affect company valuations and borrowing costs.

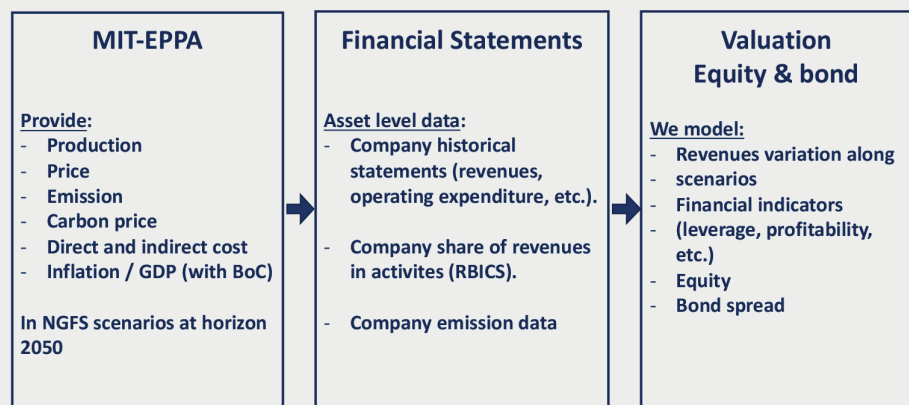
We illustrate this model with two companies: one from the oil and gas sector, and one from the utilities sector. By breaking down the revenue streams of

these companies and assessing how they might evolve under different NGFS scenarios (for instance, baseline, 2°C, and net zero by 2050), the model provided insights into how these businesses would fare in the face of climate transition risks. Unsurprisingly, in the case of the utilities company, which generates more than 60% of its revenues from electricity generation, the transition to a low-carbon economy posed less risk compared to the oil and gas company. The utilities company's operations in renewable energy made it more resilient to climate risks, potentially allowing it to increase its revenues as demand for cleaner energy sources grows. Conversely, the oil and gas company faced significant risks, with higher costs and potential revenue declines due to increased regulation, carbon pricing, and a declining market for fossil fuels.

Impact on equities and bonds

The methodology also examined how these scenarios affect equity and bond valuations. By connecting financial state-

FIGURE 1: SCHEMATIC OF THE FRAMEWORK LEVERAGING ON MIT-EPPA⁵



Source: Amundi, framework co-developed by Amundi and the MIT Joint Program

‘Major carbon-intensive corporations could face up to a 50-basis-point rise in capital costs by 2030 in a net zero-consistent scenario.’

ments (for instance, revenues, operating expenses) to transition scenarios, the model projected future earnings and cash flows, helping investors assess how different pathways could influence equity valuations, using a classic discounted cash-flow method. For bonds, the model analyzed how transition risks affect the probability of default and credit spreads using the projected profitability of the activity.

Focusing on selected major carbon-intensive corporations, the results reveal that key energy players could face up to a 50-basis-point rise in capital costs by 2030 in a net zero-consistent scenario, barring substantial investments and low-carbon assets acquisition.

Application to net zero investment process

Following a top-down approach, the methodology helps connecting long term extra-financial risk to valuation models, providing investors with very clear signals on exposure to transition risks. It is a good fit for investors willing to go the extra mile by recognizing that large companies are active in several sectors and regions, and thus introduce a precise split of revenues. Last but not least, such models can help identify critical actions and levers to accelerate the transition of high-emitting companies, which can be integrated into dialogue and engagement with companies.

Deepening our understanding of companies’ exposure

to climate risk has become a priority with regards to clients’ increasing level of ambition on climate. Now, the challenge is to democratize the use of sophisticated metrics and models to inform investment decisions and engagement activities across all our portfolios. As in other sectors, the transition of the asset management industry demands both high ambition and time, and a continuous alignment among clients, academics, regulators, investors and companies. Upcoming regulations, as illustrated by the EU CSRD⁶ and CSDDD⁷, requiring the adoption and implementation of a climate transition plan, are encouraging and should improve the quality and coverage of the data needed to feed climate models. ■



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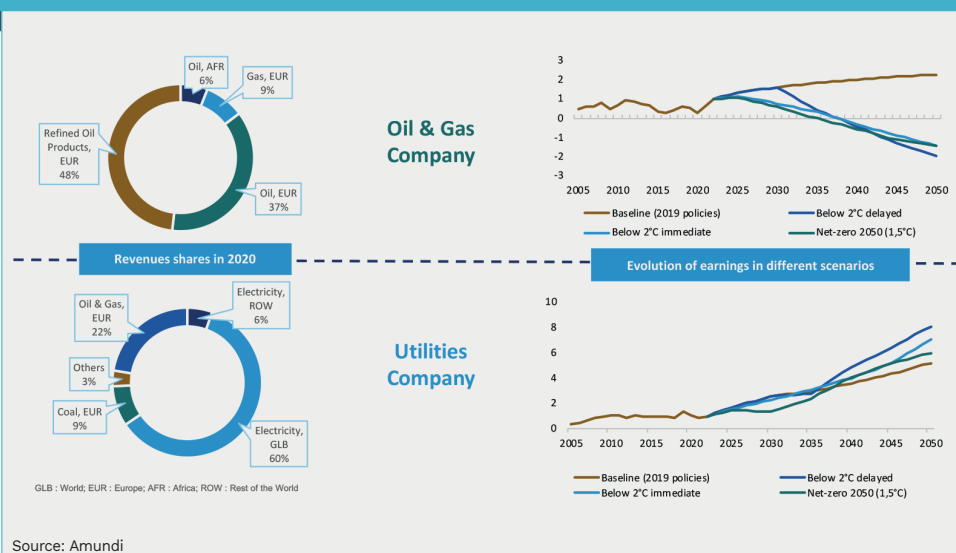


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- 1 Net Zero Asset Owner Alliance
- 2 Institutional Investors Group on Climate Change
- 3 CO₂ Emissions in 2023, IEA
- 4 ‘Climate-Related Stress-Testing and Net-Zero Valuation: A Case Study for Selected Energy-Intensive Companies’
- 5 The EPPA model provides projections of world economic development at a regional and sectoral level, including the economic implications of greenhouse gas (GHG) emissions, conventional air pollution, land-use change, food demand, and natural resource use.
- 6 Corporate Sustainability Reporting Directive
- 7 Corporate Sustainability Due Diligence Directive

FIGURE 2: CASE STUDY – OIL AND GAS VERSUS UTILITIES



SUMMARY

Net zero alignment approaches are evolving rapidly, driven by updates from net zero initiatives and accelerated ambition from all stakeholders.

Investors are facing challenges in balancing emissions reductions while providing capital for the transition of high-emitting companies.

Net zero investors have no choice but to rely on sophisticated models to correctly price climate risk.

Research shows that carbon-intensive companies may see a rise in capital costs of up to 50-basis-points by 2030.