

PROTECTING VALUE
AND REDUCING RISK:

How Asset Managers Are Using Smarter Climate Risk Metrics



By Chris Hay, Vice President, Sustainability Solutions, BlueOnion

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Why Climate Risk Metrics Must Evolve

According to Swiss Re, climate-related disasters resulted in over \$280 billion in 2023 alone. Yet many asset managers still rely on outdated risk models that fail to capture these real financial impacts.

Traditional climate metrics—such as Climate Value at Risk (CVaR) and Implied Temperature Rise (ITR), have long been used to assess portfolio exposure. However, these models often depend on long-term projections filled with uncertainties, making them difficult to apply in real-world financial decision-making. They tend to focus on policy risks and carbon pricing while overlooking physical risks—such as extreme weather events, water scarcity, and supply chain disruptions—that directly impact corporate financials.

In response, asset managers are shifting toward practical, finance-based indicators that provide a more transparent, more immediate view of climate risks.

Instead of relying solely on abstract projections, they analyze operational expenditure (OPEX), capital expenditure (CAPEX), and physical asset-liability risk metrics that directly reflect how climate change affects corporate financials. This shift marks a critical evolution in climate risk management, one that prioritizes financial resilience and strategic adaptation in the face of mounting climate uncertainty.

Why Traditional Climate Metrics Fall Short

While CVaR and ITR have contributed to climate risk assessments, they exhibit fundamental weaknesses that limit their effectiveness in investment decision-making. First, these models provide static and oversimplified assessments. They offer a snapshot of potential risks at a given point in time but fail to reflect how companies within the constituent actively adapt to climate challenges through sustainability investments, operational changes, or policy responses.

Second, their accuracy is highly dependent on assumptions. CVaR estimates financial losses due to climate change, but unpredictable policy shifts, technological advancements, and market trends influence its reliability. Similarly, ITR attempts to measure a company's implied temperature rise, yet its reliance on emissions trajectory assumptions makes cross-industry and cross-geography comparisons difficult.

Finally, traditional metrics overemphasize transition risks—such as policy changes, carbon pricing, and consumer preference shifts—while failing to fully account for physical risks like hurricanes, floods, and droughts, which have immediate financial consequences.

Real-World Implications

Consider the case of a global clothing manufacturer. Based on ITR, its emissions trajectory could suggest a low climate risk profile. However, the industry's heavy reliance on water-intensive processes, especially in drought-prone regions, can lead to severe operational disruptions, supply shortages, and rising OPEX, ultimately undermining profitability. Such cases illustrate why asset managers increasingly recognize the need for a more comprehensive approach that integrates real-world financial indicators.

How Modern Asset Managers Are Using Smarter Financial Indicators

To address these gaps, asset managers are incorporating new climate risk indicators that provide a more tangible and forward-looking assessment of financial exposure. One critical metric is Operational Expenditure (OPEX), which helps identify cost vulnerabilities. Rising energy costs, supply chain disruptions, and climate-induced resource shortages directly impact on a company's operating expenses and profitability. For example, a food and beverage company sourcing ingredients from drought-prone regions might experience a 20% surge in water procurement costs, increasing OPEX and reducing margins.

Another key indicator is Capital Expenditure (CAPEX), which evaluates climate resilience investments. Companies investing in renewable energy, energy-efficient infrastructure, and climate adaptation strategies are better positioned for long-term resilience. For instance, a real estate investment firm that shifts its CAPEX toward climate-resilient building materials and solar energy integration can enhance asset value while reducing exposure to rising insurance costs from extreme weather events.

Physical Asset Liability Risks also play a crucial role, particularly for companies with significant real estate holdings, supply chain dependencies, or infrastructure assets. A logistics company, for example, with key warehouses located in flood-prone areas, may face escalating insurance premiums and potential asset write-downs, which can impact its valuation.

Beyond financial considerations, the supply chain and reputational risks must also be accounted for. Businesses dependent on climate-vulnerable regions may face operational disruptions and cost volatility, while poor climate performance can lead to consumer backlash, investor skepticism, and regulatory scrutiny. By integrating these

insights, asset managers can build more resilient portfolios that account for immediate and long-term climate risks.

How Asset Managers Can Implement Practical Climate Metrics Effectively

Asset managers should adopt a structured and actionable approach to successfully integrate new climate risk metrics into portfolio management. The process begins with conducting materiality assessments to identify which climate risks are most relevant to portfolio holdings. These assessments should consider factors such as sector, geography, and investment horizons to prioritize risks that require the most attention.

Once the material risks are identified, asset managers need to integrate climate data into their analysis. By collecting and analyzing data on OPEX, CAPEX, and physical risk exposures, they can assess financial vulnerabilities and better understand how climate risks translate into tangible financial impacts.

Scenario analysis and stress testing are critical next steps, helping asset managers quantify potential financial impacts through climate scenario modeling. At the same time, engagement with portfolio companies is essential to promote improved climate risk management, enhance transparency, and encourage investments in sustainability initiatives.

Finally, continuous monitoring and adaptation are necessary to ensure that risk models and portfolio strategies remain current as new climate data emerges. By regularly revisiting and refining their approach, asset managers can build more resilient portfolios and align with long-term sustainability goals.

Turning Climate Data into Actionable Insights

Up-to-date and modern climate analysis tools like BlueOnion, which has the broadest global coverage against issuers, sectors, countries, industries, and at the investment product level, provide asset managers with the tools to navigate climate risks effectively while combating greenwashing across the financial ecosystem.

As the focus shifts to practical climate risk assessments, asset managers require informed decision-making powered by comprehensive climate scenario analysis. This includes evaluating transition and physical risks and translating these insights into actionable financial strategies. To combat greenwashing, asset managers must demonstrate robust due diligence and transparency—differentiating between investees committed to sustainability and those falling behind.

Regulatory compliance also demands active stewardship as an integral part of climate-related risk management and reporting. Data-driven insights enable asset managers to engage meaningfully with investee companies, facilitating strategic CAPEX allocation, effective risk management, and improved climate disclosures.

Future-focused climate risk monitoring tools, like the Network for Greening the Financial System (NGFS), offer scenarios ranging from net-zero by 2050 to delayed transitions and the worst-case fragmented world scenario. These tools support asset managers in assessing transition and physical risks up to 2100. With real-time tracking of companies' climate performance, asset managers can remain aligned with sustainability objectives while proactively mitigating emerging risks.

The Time Is Now

As climate risks become more financially material, asset managers can no longer rely on outdated models like CVaR and ITR. The transition to practical, finance-driven metrics—such as OPEX, CAPEX, and physical risk assessments—is an upgrade and a necessity in climate risk management.

With climate risks accelerating and regulatory demands intensifying, a new approach is urgently needed. By embracing real-world financial indicators and advanced analytics, asset managers can effectively mitigate risks, build resilience, and seize opportunities in sustainability-focused investments.

To explore how BlueOnion can help you navigate the climate journey, contact us for a test drive. @chris.hay@blueonion.today