

**MOODY'S**

A Guide for Chief Risk Officers

# Safeguarding Credit Portfolio Defense

The Power of What-If Analysis



**Chartis**  
**RiskTech100**  
**2025**

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Moody's  
Credit Portfolio  
Management

## WHAT IF: BALANCING THE ART AND SCIENCE OF RISK INTELLIGENCE

In today's increasingly complex financial landscape, where portfolios are subject to macroeconomic variables, geopolitical shifts, and industry disruptions, understanding and managing portfolio risk is essential for maintaining long-term stability and profitability. As Chief Risk Officers (CROs), your primary responsibility is to ensure that the institution's portfolio is resilient, well-diversified, and capable of withstanding external shocks. One of the most valuable tools in achieving this is what-if analysis—a powerful method that allows for the simulation of multiple economic scenarios to assess their potential impact on portfolio performance.

What-if analysis provides a structured approach to examining hypothetical scenarios and allows risk managers to proactively assess portfolio vulnerabilities. By simulating changes in critical risk factors—such as interest rates, GDP growth, or sector-specific disruptions—what-if analysis enables CROs to make informed decisions about risk mitigation strategies, capital allocation, and portfolio rebalancing.

#1

Ranked by Chartis as the #1 credit portfolio risk management platform



## PRECISION IN PREDICTING RISK

This proactive approach allows for early identification of potential risks and enables risk managers to assess both **expected** and **tail-risk events**.

Tail risk refers to the risk of rare and extreme events that fall outside the normal distribution curve—events that, while low in probability, can have catastrophic consequences on a portfolio. These events, such as market crashes, geopolitical shocks, or unforeseen economic downturns, can cause severe disruptions if not properly managed.

By examining how the portfolio would respond to these high-impact events, risk managers can develop strategies to safeguard portfolio value and minimize potential losses. This makes what-if analysis a critical tool for overall risk assessment.

[Learn more](#)

## WHAT-IF ANALYSIS IN CREDIT PORTFOLIO MANAGEMENT

### Scenario-Based Stress Testing

What-if analysis allows for the simulation of both expected and extreme economic events, providing a clear picture of how the portfolio would perform under different conditions. By examining the portfolio's response to these stress tests, CROs can ensure that the institution is adequately prepared for adverse market events.

### Identification and Mitigation of Concentration Risks

By testing different scenarios, concentration risks become apparent, enabling the CRO to recommend diversification strategies that reduce exposure to a single point of failure.

### Enhanced Capital Reserves and Liquidity Planning

What-if analysis offers insights into how capital reserves should be adjusted to protect against downside risk. This enables more accurate planning and ensures that the institution can absorb losses without compromising financial stability.

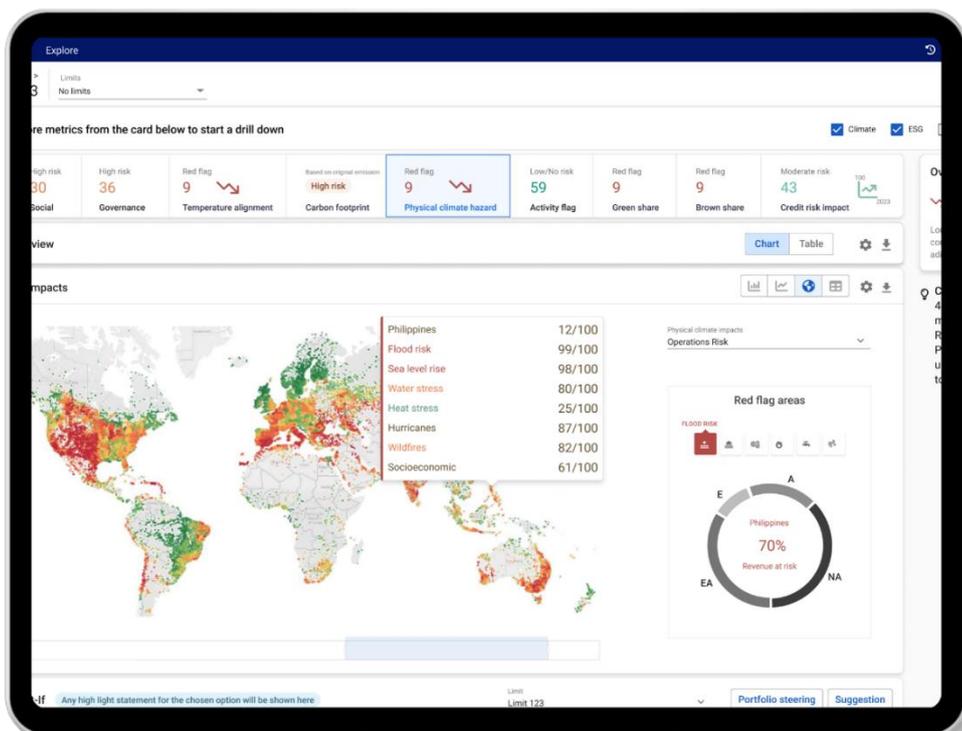
### Optimized Portfolio Allocation

By testing how different assets react to shifts in macroeconomic variables, what-if analysis provides insights into how portfolios can be optimized for risk-return balance.

### Climate Risk Scenarios

As climate risk becomes increasingly important, what-if analysis enables CROs to simulate the effects of climate-related disruptions, such as regulatory changes or shifts in consumer behavior. This insight allows for strategic adjustments to mitigate long-term climate risks.

**FIGURE 1** What-If Analysis for Climate Risk – Powered by PortfolioStudio™



[Learn more](#)

## USE CASES IN CREDIT PORTFOLIO MANAGEMENT

- **Assessing Physical Climate Risk:** A multinational bank used what-if analysis to evaluate the financial impact of increased extreme weather events, such as hurricanes and wildfires, on its real estate-backed loan portfolio. The simulation revealed heightened default risk in high-exposure regions, prompting the bank to refine its risk-based pricing, adjust capital buffers, and enhance due diligence for future lending decisions.
- **Strategic Asset Class Expansion:** A leading financial institution used what-if analysis to evaluate the risks and opportunities of expanding into new asset classes and markets. Scenario modeling provided insights into potential volatility, liquidity challenges, and regulatory considerations, enabling data-driven decision-making for long-term growth.
- **Identifying Sector Vulnerabilities:** A global bank leveraged what-if analysis to assess the potential impact of a market downturn on its sector exposures. By modeling severe price shocks in key industries, the bank identified concentration risks and adjusted its portfolio strategy to enhance resilience.

### Probability of Default

*If my bank's Probability of Default increases from 1.5% to 3%, what is the impact on RWAs?*

### Expected Loss & Economic Capital

*If I reduce my exposure to high-risk obligors by \$500M, how will my Expected Loss (EL) and Economic Capital (EC) change?*

### Expected Credit Loss

*If a major supply chain disruption extends for six months, how much will my ECL increase in my corporate loan portfolio, particularly for retail?*

## CUSTOMER TESTIMONIAL

**"Moody's credit portfolio management solution enhances portfolio steering by enabling efficient what-if analysis. With faster processing, confidence in credit risk limits, and clearer visual insights, it empowers better management decisions."**

Head of Quantitative Risk Analytics  
Global Financial Institution

[Learn more](#)



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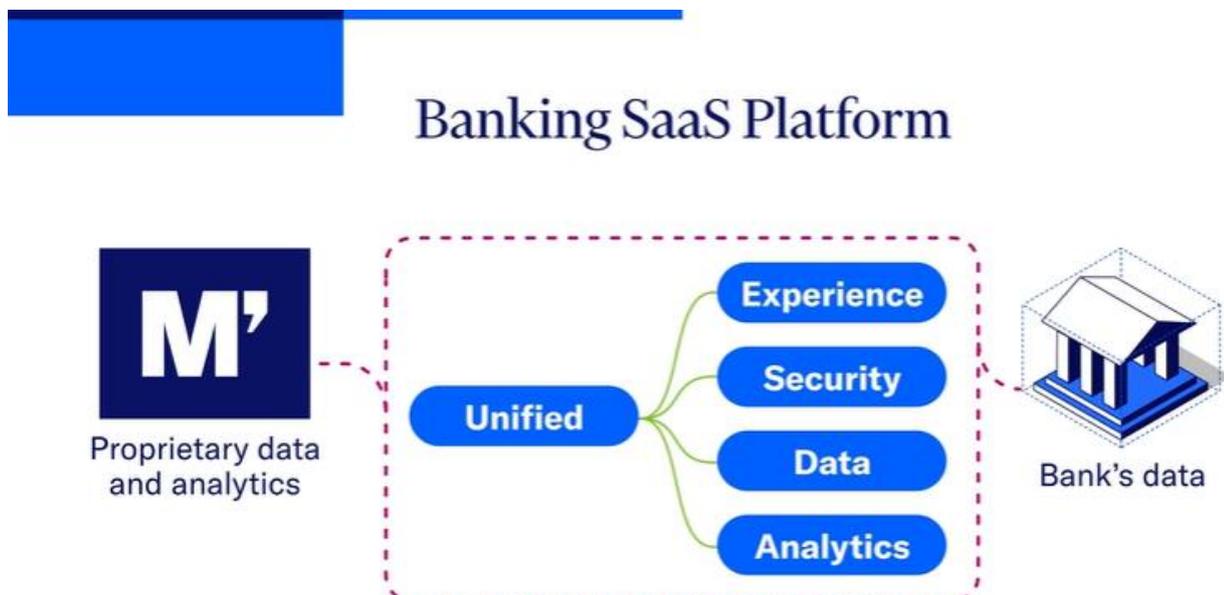
## TRADITIONAL VS. MODERN WHAT-IF ANALYSIS

While what-if analysis has long been a cornerstone of portfolio risk management, the way it is conducted has evolved significantly. Traditional methods often relied on complex spreadsheets, standalone risk models, and manual data aggregation, which limited the speed, scalability, and real-time responsiveness of risk assessments. As risk managers increasingly face the demands of managing portfolios in a volatile, fast-moving financial environment, modern, cloud-native SaaS technologies have emerged to streamline and enhance the power of what-if analysis.

→ **Traditional What-If Analysis:** Involves manual data aggregation, limited scenario flexibility, static reporting, and slow decision-making processes.

### Modern SaaS-Enabled What-If Analysis

- 1 Faster, More Accurate Risk Insights:** Automated data aggregation and scenario generation enable faster and more precise insights, allowing for more timely responses to market changes.
- 2 Increased Collaboration and Accessibility:** Cloud-native solutions allow teams to collaborate in real time, ensuring that all relevant stakeholders are on the same page.
- 3 Improved Decision-Making and Risk Mitigation:** The ability to explore a broader range of risk scenarios empowers CROs to make more informed decisions and effectively mitigate risks.
- 4 Cost-Effective Solutions:** Cloud-native platforms provide scalability, handling increasing volumes of data and complex risk models without significant infrastructure investment.



[Learn more](#)

## WHAT-IF ANALYSIS: A STRATEGIC IMPERATIVE FOR THE CRO

For Chief Risk Officers, the ability to assess potential risks and rewards under various economic conditions is central to effective portfolio management.

What-if analysis offers an essential framework for identifying, quantifying, and mitigating risks that could negatively impact portfolio performance. By modeling a wide range of scenarios—whether economic shocks, interest rate changes, recessions, climate risks, or extreme tail risks—CROs can gain a comprehensive understanding of how their portfolios will respond to different conditions.

## TAKE CONTROL OF CREDIT PORTFOLIO MANAGEMENT

The PortfolioStudio tool is part of Moody’s cloud-native, integrated Risk and Finance platform. This suite of award-winning solutions combines leading risk analytics and high speed processing capabilities that enable you to address risks with speed and precision and drive growth. [Connect with our solution specialists to learn more.](#)

Rating Transition

Scenario: S2 - MEDC Alternative Scenario 2 - Downside - 75th Percentile | From: 12/31/23 | To: 3/31/24 | NO FILTERS | Probability | Exposure | Download

Exposure			Rating																			
From	To	Change	Rating	To Aaa	To Aa1	To Aa2	To Aa3	To A1	To A2	To A3	To Baa1	To Baa2	To Baa3	To Ba1	To Ba2	To Ba3	To B1	To B2	To B3	To Caa1		
189,560,092	190,652,203	+0.58%	Aaa	97.47%	1.11%	0.69%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
30,000,000	35,970,278	+19.90%	Aa1	2.56%	94.38%	1.53%	1.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
220,654,798	207,962,331	-5.75%	Aa2	1.94%	1.94%	90.69%	4.14%	0.65%	0.26%	0.26%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
238,566,816	235,311,864	-1.36%	Aa3	0.34%	0.50%	2.52%	93.96%	1.66%	0.40%	0.40%	0.03%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
67,912,018	71,474,393	+5.25%	A1	0.02%	0.07%	0.10%	0.36%	94.95%	3.36%	0.77%	0.05%	0.02%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
50,000,000	52,785,757	+5.57%	A2	0.01%	0.01%	0.01%	0.04%	2.70%	95.01%	1.11%	0.41%	0.09%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
40,000,000	39,391,482	-1.52%	A3	0.00%	0.00%	0.00%	0.00%	0.55%	3.38%	91.41%	3.25%	0.29%	0.29%	0.05%	0.05%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	
30,000,000	31,694,730	+5.65%	Baa1	0.00%	0.00%	0.00%	0.00%	0.09%	0.19%	0.38%	94.33%	2.40%	1.46%	0.07%	0.07%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	
40,000,000	39,488,099	-1.28%	Baa2	0.00%	0.00%	0.00%	0.00%	0.03%	0.11%	0.23%	2.31%	94.28%	2.50%	0.16%	0.16%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	
50,000,000	48,857,659	-2.28%	Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.03%	1.71%	1.71%	94.44%	1.09%	0.63%	0.13%	0.03%	0.03%	0.01%	0.00%	0.00%	
956,693,724	956,693,725																					

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