

Solution primer

OneSumX Stress Testing

In the aftermath of one of the most severe financial crises in history, there is a critical imperative for firms to anticipate and address potential future financial disturbances in both the near and long-term future. Regulatory bodies, central banks, and the financial markets are entrusting firms with the responsibility to demonstrate adept risk management skills and absorb potential losses seamlessly while safeguarding ongoing market stability, including the vital provision of liquidity. With any erosion of this trust, the industry could face unforeseen and potentially catastrophic impacts.



OneSumX Stress Testing

Stress testing serves as a critical component within financial analysis, allowing institutions to identify their resilience and durability in the face of expected and unexpected performances of risk factors and resultant losses, that usually arise during periods of financial crisis. Considering the intertwined nature of market, counterparty, credit, and behavioral risks faced by financial institutions, it is imperative that stress testing be conducted both in integration across the organization and in silos to effectively manage these interconnected challenges.

Moreover, as portfolio and accounts evolution is driven by strategies for generating new and rolling over existing business under consideration of risk factors, stress testing needs to be defined and employed using both static and dynamic analysis. Our integrated financial risk and profitability solution allows firms to construct, perform, analyze and report all types of financial stress testing.



Institutions need to establish deterministic scenarios to stress the specific risk factors to which the instruments in their accounts and portfolios are exposed.

These stresses may vary from basic to intricate rule-based shocks applied to individual and/or multiple and integrated risk factors, including adjustments to algorithm parameters for simulating the stochastic development of these factors, known as stress VaR. Additionally, the impact of stress testing in Capital, Liquidity, Value and Income must also be calculated and reported accordingly.

OneSumX enables firms to define and perform stress testing analyzing and reporting all downstream effects:

Stressing market risk factors

For stressing the current and future market risk factors, such as prices, curves or rates, the relevant stress scenarios defined by the institutions, regulators, or central banks must be employed. These scenarios encompass deterministic as well as sophisticated rule-based shocks driven by assumptions such as microeconomic factors. They also involve interactions and integration with various types of risk factors, such as counterparty downgrading, alongside considerations of market evolution and future business strategies.

Stressing credit & counterparty credit risk factors

All counterparty credit characteristics from ratings, spreads, probability of default (PD) and migrations (transition) matrices through descriptive characteristics such as regions or industry, all the way to behavioral characteristics, such as recovery rates can be considered

in stress testing scenarios. Shocks can be applied to these characteristics based on the institution's scenarios.

Such scenarios could have a high degree of complexity, driven for instance by the strategies for defining new business and also by considering correlations between the counterparty credit risks with other types of risks such as the evolution of market prices. Additionally, idiosyncratic and sensitivity factors can be also taken into account.

Our OneSumX solution also allows for stress testing to be applied to credit enhancements. Users can fully measure and report the downstream impact to the credit exposures, stress-testing risk, systemic and concentration risks under stress conditions in our OneSumX solution.

Stress behavior

Behavioral risk types, such as the exercise of prepayments, credit line drawings, withdrawals, remaining principal, as well as sales and renegotiations are also modeled based on stress scenarios. These scenarios are driven by the expected or unexpected performance of market and counterparty credit risk factors.

Stress VaR

OneSumX Stress Testing also enables the application of stress scenarios into parameters of value at risk (VaR) models used to measure both market and credit risk based on stochastic algorithmic processes.

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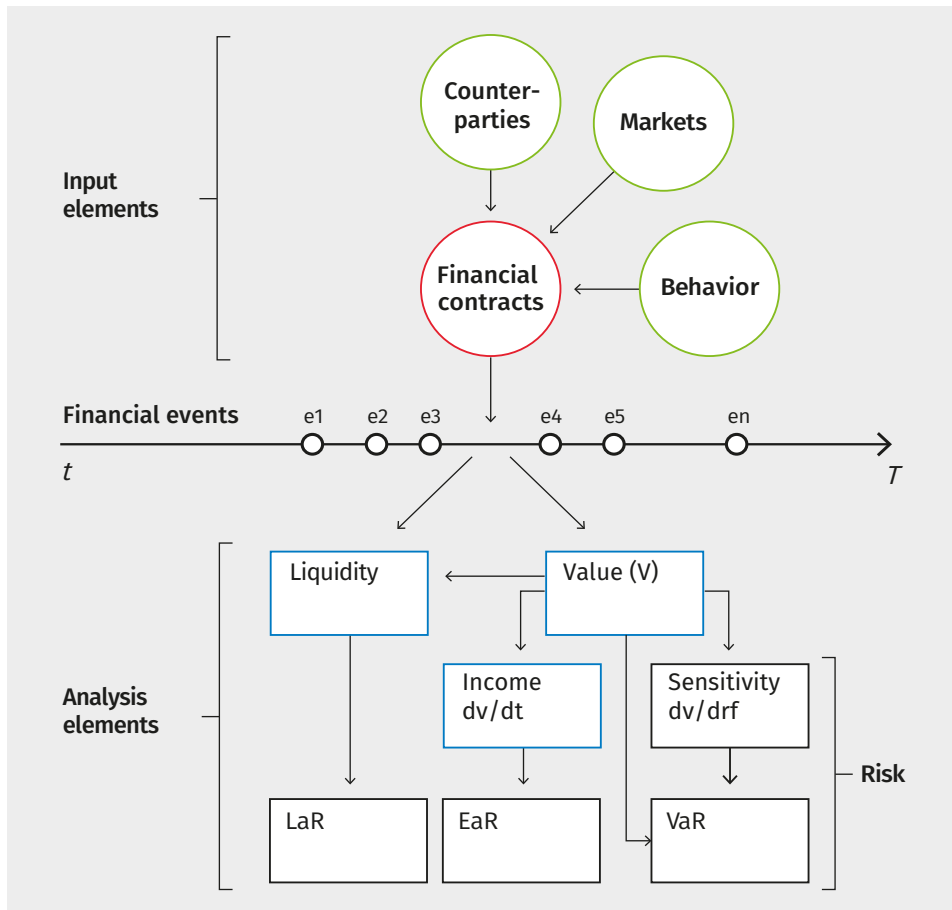
Impact on capital, liquidity, value, income and risk measurements

Corresponding risk measurement arise from the impact of stressing market, counterparty and behavioral risk factors on either a siloed or integrated basis, related to capital, liquidity, value and income. Comprehensive stress testing functionality is part of our overall OneSumX for Risk solution allowing firms to define and implement their own stress scenarios. The functionality includes simple to complex stress scenarios, incorporating both individual as well as combined risk factor stressing considering their correlations.

The OneSumX for Risk solution allows for the modeling of market, credit and behavioral risk factor interaction under stress conditions to analyze the downstream impact in capital, liquidity, value and income. This ensures full transparency for our clients, providing them with a comprehensive view of the impact each risk factor has on business, under both stress and volatile conditions. Moreover, the solution ensures consistent results among the entire institution's accounts and portfolios.

OneSumX for Risk provides powerful stress testing capabilities under a variety of strategies and scenarios, providing necessary analytics for measuring and maximizing both performance and robustness of an organization's existing and future accounts and portfolios.

Market, Credit, and Behavior Stress: Impacts on Capital, Liquidity, and Profitability



Perform sophisticated scenario analysis and stress testing

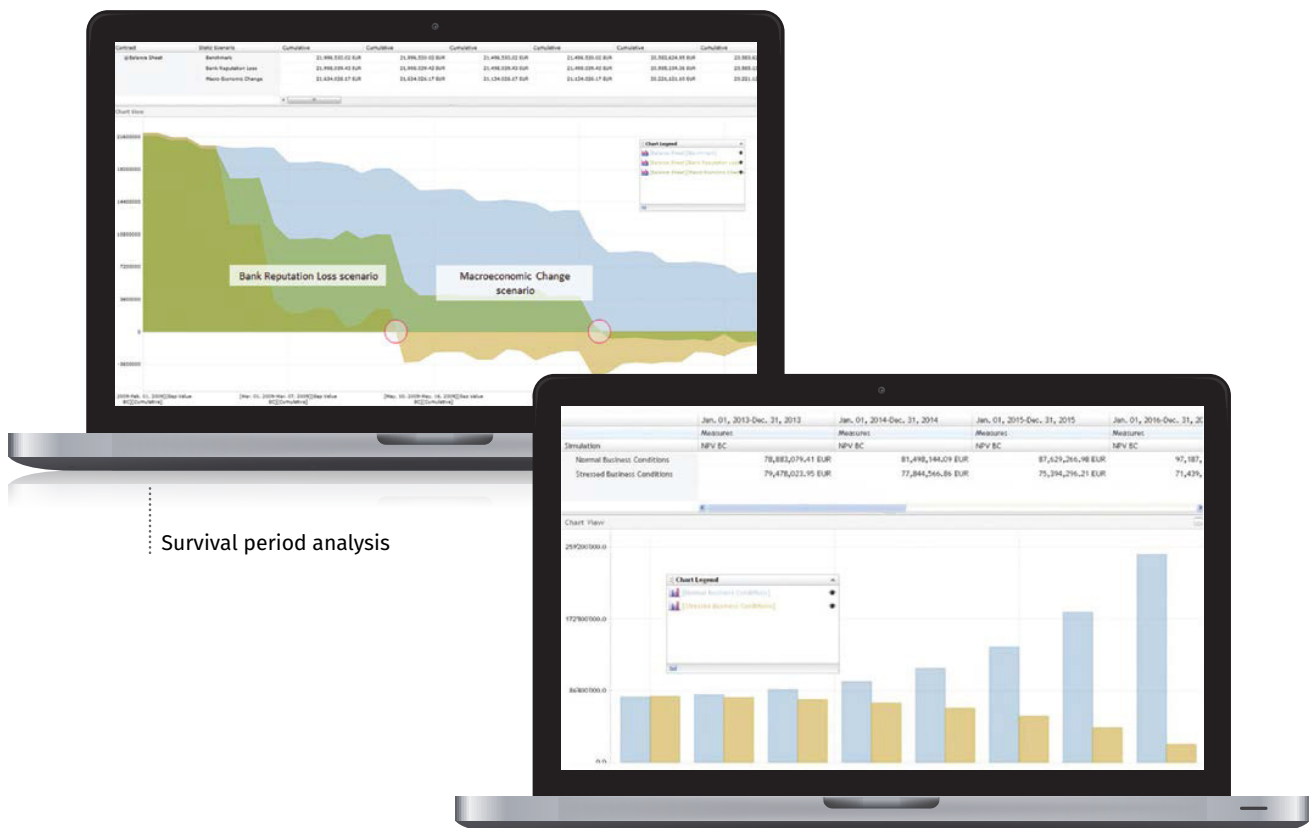
Our reliable, static analysis enables institutions to evaluate the results of stress conditions based on current conditions recognizing risks to existing business operations and identifying potential unexpected losses.

Additionally, our dynamic analysis simulates the evolution of risk factors under consideration of stress scenarios. The results then form the basis of profitability and performance management strategies for existing business as well as the generation of new business opportunities providing maximum profitability with minimum expected or unexpected losses.

The OneSumX solution also supports the definition of strategies on sales, hedging, collateral management and limits under scenarios on expected and stress conditions.

The OneSumX for Risk solution provides powerful stress testing capabilities under a variety of strategies and scenarios providing all necessary analytics for measuring and maximizing both performance and robustness of an organization's existing and future accounts and portfolios.

Additionally, our dynamic analysis simulates the evolution of risk factors under consideration of stress scenarios. The results then form the basis of profitability and performance management strategies for existing business as well as the generation of new business opportunities providing the maximum profitability with minimum expected or unexpected losses.



Survival period analysis

Dynamic simulation – what-if simulation with new production and rollovers

About Wolters Kluwer

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Wolters Kluwer reported 2023 annual revenues of €5.6 billion. The group serves customers in over 180 countries, maintains operations in over 40 countries, and employs approximately 21,400 people worldwide. The company is headquartered in Alphen aan den Rijn, the Netherlands.

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Learn more about the OneSumX for Finance, Risk and Regulatory Reporting solutions. [Click here.](#)

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