

SAS® Solution Content for Stress Testing

Simplify and accelerate supervisory stress testing and internal scenario-based business planning activities



Key Benefits

- Allows financial institutions to quickly and efficiently meet the challenges of supervisory stress testing and internal scenario-based business planning.
- Accelerates the model estimation-to-implementation process through simplified setup and maintenance.
- Streamlines the management of multiple scenarios and portfolio growth assumptions.
- Establishes a robust data quality framework consistent with BCBS 239 principles.
- Provides sophisticated modeling of expected credit losses (ECL) and risk-weighted assets (RWA) over the scenario horizon.
- Supports the implementation of models (SAS or other language) from both internal and external data sources.

Overview

SAS Solution Content for Stress Testing is an add-on component to SAS Expected Credit Loss. This package of additional content is designed to meet the requirements for stress testing, including modeling, workflow and reporting. It enables financial institutions like yours to

use industry best practices to reduce implementation and maintenance challenges while remaining focused on their core business activities.

With SAS Solution Content for Stress Testing, your institution can efficiently address the computational and process challenges of supervisory stress tests while meeting expectations and timelines. At the same time, using its core capabilities, you can elevate stress testing beyond simple compliance, creating a powerful environment for strategic, scenario-based planning.

SAS Solution Content for Stress Testing is designed to support the entire stress-test process, from scenario and data management to quantification and reporting. And because it's fully customizable, you can create and maintain an efficient, sustainable program that meets your organization's unique needs and delivers exceptional process transparency, strong controls and governance.

Capabilities

Highly customizable risk and finance data model

Effectively manage the breadth of data required for stress testing, including data required for macroeconomic scenarios, risk modeling and financial accounting. The included data model is highly customizable, so it can accommodate internal data structures and integrate with external modules. Key elements include:

- A staging area for portfolio and economic data at various levels of granularity.
- A data repository where you can save all intermediate and final outputs from calculations.
- A data catalog that keeps track of all input/output objects used in a given analysis.

Built-in data quality functionality

Ensure the accuracy, completeness and consistency of loaded data and provide the necessary evidence for data quality attestation. Key elements include:

- Preconfigured data quality rules – mapped to the BCBS 239 principles – that are executed based on a predefined process.
- Automated data quality reports with full, drill-down functionality to support diagnostics and auditability.

Streamlined process workflow

Use SAS Solution Content for Stress Testing to efficiently orchestrate required tasks while maintaining essential internal controls. It provides a structured workflow to accelerate implementation, which you can fully customize as needed. Key elements include:

- A sample workflow that maps all relevant activities and assigns individual tasks to respective organizational units.
- Task-level status tracking for project monitoring and bottleneck identification.

Flexible scenario management

Whether you need to run broad macroeconomic projections or perform targeted sensitivity analysis, SAS Solution Content for Stress Testing provides a centralized scenario repository manager that helps you conveniently manage all your test scenarios. This functionality enables you to:

- Define or load scenarios at any level of granularity.
- Revise or enrich scenarios with relevant risk factor data.
- Apply scenarios to selected portfolios.

Centralized model library

SAS Solution Content for Stress Testing includes a model inventory to simplify maintenance of all models used for stress testing. Use it to:

- Maintain multiple model versions to support attribution analysis, back testing and performance measurements.
- Run models from SAS scripts or other sources.
- Incorporate dependencies and aggregations through easily configurable user defined logic.
- Store and retrieve models from SAS Model Risk Management or from your institution's internal model libraries.
- Simplify model setup and maintenance with prebuilt templates for forecasting impairments and risk-weighted assets. These templates can be modified or extended as needed to address your institution's specific methodological requirements.

Robust projection engine

Now you can incorporate growth targets and business assumptions into your stress scenarios for a clearer understanding of lending decision impacts on portfolio risk. In addition, you can assess a range of runoff and prepayment assumptions to further refine your analysis and determine a range of potential outcomes. SAS Solution Content for Stress Testing enables you to:

- Apply assumptions over different levels of granularity, from a contract to a segment level basis.
- Use different assumptions and methodologies, such as a Copula-based historical distribution, a user-defined customized projection, or an upload of a synthetic portfolio.
- Easily model portfolio changes in terms of volume or growth rates using static, constant or dynamic balance sheet approaches.

Best-in-class model templates

Use the sophisticated modeling templates included in SAS Solution Content for Stress Testing to robustly and efficiently project stressed expected credit losses (ECL) and risk-weighted assets (RWA). Use templates as they are, or easily customize them to

meet your unique requirements. You can also:

- Incorporate portfolio runoff and prepayment profiles, credit quality movements (e.g., risk rating and delinquency level) and IFRS 9 stage migrations in your ECL calculations.
- Apply stage allocation rules and calculate stressed ECL and RWA for your portfolio.

Flexible segmentation capabilities

SAS Solution Content for Stress Testing provides a user-friendly interface to create and edit segmentation schemes, allowing you to tailor both models and results to your specific needs. For example, you can:

- Apply custom segmentations to different analysis runs.
- View and aggregate results along business- and supervisory-defined segmentation schemes.

Prebuilt reports

Reduce the time and effort required for implementation using a suite of prebuilt report templates that summarize the entire stress-testing process. These templates can be used out of the box or customized, and all reports can be edited and shared through a user-friendly web interface. Using SAS Visual Analytics, business users can also modify variables, derive new metrics and drill down to extract deep insights from the results. SAS Solution Content for Stress Testing also delivers:

- Data quality reports displaying overall and specific quality metrics based on the execution of data quality rules.
- Result reports, which include actual and projected financial statements, so you can visualize the effects of stress scenarios on the income statement and balance sheet and quickly assess their impacts to capital.
- Additional EBA stress-test reporting automation, which is available with SAS Regulatory Content for EBA Taxonomies (license fee applies).

Why SAS?

Do you need to implement a robust scenario-based stress test solution under tight deadlines and with limited resources? With SAS Solution Content for Stress Testing, you can:

- **Quickly establish a sustainable platform.** Integrate scenarios, models and portfolios into a centralized environment to execute stress tests quickly and efficiently.
- **Manage analyses over multiple scenarios.** Specify and edit scenarios, quickly execute computations, and consolidate data into financial statements and reports for management review and regulatory disclosure.
- **Ensure auditability.** Maintain full lineage of data, computations and assumptions, and transparently assess their impacts on results down to the finest granularity.
- **Elevate your strategic insights.** Faster turnaround and reduced resource requirements allow you to expand both the breadth of scenarios and the depth of analysis for each. Use scenario-based planning as a strategic tool for competitive advantage.

Learn More

Whether you are stress testing for regulatory or internal planning purposes, unstructured and ad hoc processes lack sufficient controls and governance, require too much effort and are negatively evaluated by supervisors and auditors. What's needed is a robust platform that integrates scenarios, models and portfolios. SAS Expected Credit Loss and SAS Solution Content for Stress Testing deliver this platform, enabling you to operate more efficiently and continue to meet expectations over time. Find out more at sas.com/scst.

To contact your local SAS office, please visit: sas.com/offices

