

# Oracle Financial Services Enterprise Modeling



As the current financial crisis unfolds, financial institutions and government regulators are realizing that current stress testing practices and models have been found wanting in anticipating the complex shocks and scenarios that have changed the banking landscape forever. This environment has resulted in unprecedented regulatory pressure to include advanced techniques and practices regarding stress testing and modeling as an integral part of a bank's risk management systems. Oracle Financial Services Enterprise Modeling provides integrated stress testing and modeling capabilities that can be readily applied across multiple risk areas enabling institutions to devise appropriate enterprise-wide and holistic risk and economic capital strategies.

ORACLE'S FINANCIAL SERVICES ANALYTICAL APPLICATIONS ENABLE INSTITUTIONS TO MEASURE AND MEET RISK ADJUSTED GROWTH OBJECTIVES, PROMOTE A RISK MANAGEMENT CULTURE AND MITIGATE THE COSTS OF REGULATION THROUGH THE LOWEST POSSIBLE TCO.

## KEY FEATURES

- Enables scenarios to be applied across multiple risk categories
- Multiple methods of specifying shocks to variables
- Curve shocks such as Parallel, Twist and Inversion applied to term structure variables
- Utilizes industry standard techniques such as Regression, Time Series, Chi Square Test, Monte Carlo Simulation for modeling
- User friendly Interface enabling the business user to draw samples, transform variables, define, execute and compare test models
- Separate Sandbox area for model developing and deployment
- User-specified models and scenarios

## Comply with Regulatory Requirements on Stress Testing

Pillar II of the Basel II Accord focuses on the need to include stress testing as part of a bank's risk management system. It requires banks to have a comprehensive stress testing program that allows for assessing the impact of a scenario on the institution as a whole. Oracle Financial Services Enterprise Modeling enables the institution to carry out comprehensive stress testing which captures the effects of adverse risk events that are not estimated by standard statistical and business models, supplementing the modeling process and ensuring compliance with the Pillar I and ICAAP stress testing requirements of Basel II Accord.

## Assess Risk Under Normal and Stressed Conditions

Oracle Financial Services Enterprise Modeling is an integrated and comprehensive framework that provides a platform for addressing the stress testing and modeling needs of an institution. It enables an institution to accurately estimate its economic capital using standard statistical models and techniques as well as to assess the impact of adverse scenarios on the risk(s) faced by the bank within a single framework. Institutions are given the flexibility of defining models and scenarios specific to their risk management needs. Once the bank-specific models and scenarios are developed, Oracle Financial Services utilizes them to perform economic capital calculations. The framework captures the risk faced by an institution under both normal and extreme conditions of market movement, enabling them to develop strategies covering a broad spectrum of risk events.

**KEY BENEFITS**

- Maintain a secure repository and transparent processes for the management and auditing of multiple models and objectives
- Maintain the integrity of the enterprise data residing in the production environment
- Risk quantification under normal and stressed conditions
- Advanced models for estimation of Economic Capital for the purpose of risk management
- Flexibility of defining multiple scenarios and applying them across risk categories
- Forward looking customer metrics using cutting edge statistical and mathematical tools
- Advanced modeling and stress testing capability within a single framework

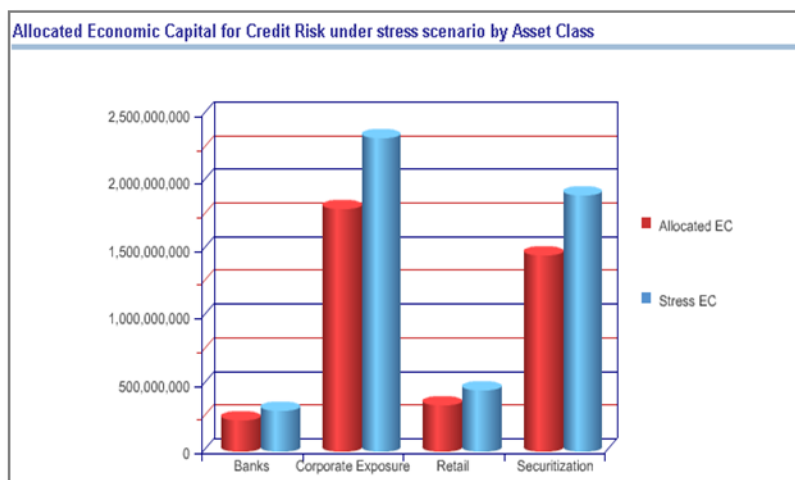


Figure 1: Allocated Economic Capital under Stress Scenario

## Gain an Enterprise-wide View of Risk

There is a high degree of interdependence among risks and any extreme crisis scenario as any individual risk exposure may have a related impact on other areas as well. In such cases (and as demonstrated in the most recent financial crisis) a silo'd approach to stress testing is unable to capture the consolidated effect of an extreme scenario on the enterprise as a whole. Oracle Financial Services Enterprise Modeling recognizes the effects of the overlap of risk factors that are common to multiple risks and permits scenarios to be applied across multiple risks. This enables institutions to focus on developing strategies for managing such risks, or a combination of risks that have the potential of inflicting the maximum damage on the enterprise.

## Enable Advanced Customer & Portfolio Analytics

Oracle Financial Services Enterprise Modeling has been designed in a flexible manner which enables its application across diverse business areas such as risk management and customer insight. It prepares the business for finer and highly granular customer marketing actions, based upon customer scoring and business forecast predictive analysis. It enables organizations to improve operational efficiency through strategic customer segmenting or identify high-value relationships for account development, or conduct sophisticated predictive analysis to obtain forward looking market and customer plans. Thus, Oracle Financial Services Enterprise Modeling helps contribute practical and actionable insights into customer relationships.

## Utilize Multiple Industry Standard Techniques

Oracle Financial Services Enterprise Modeling has multiple pre-built techniques that are used in the modeling process. These include industry standard methodologies such as regression, clustering, time series, chi square test, distribution fitting and Monte Carlo simulation among others. These techniques enable the institutions to develop a wide variety of models to suit the needs of each risk area.

## Test and Model with Complete Data Integrity

Oracle Financial Services Enterprise Modeling maintains the integrity of your enterprise

data through its “sandbox” feature. The sandbox is created for the purpose of developing models and is a separate area, distinct from the production environment where the enterprise data resides. Models are tested and tuned with the data stored in the sandbox. The acceptable model is then deployed in the production environment ensuring that models are accurately built. However, the main data residing within the bank’s production systems is not compromised.

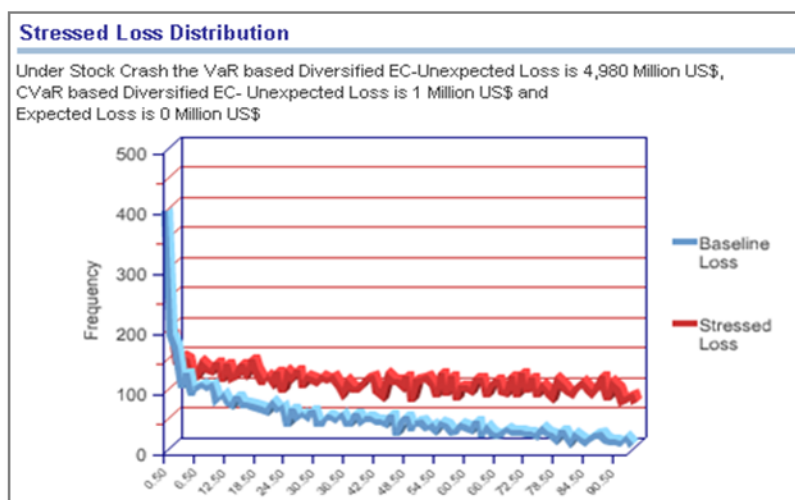


Figure 2: Comparison between Baseline and Stressed Loss Distribution

### Define Shocks to Variables using Multiple Methods

Oracle Financial Services Enterprise Modeling has been designed to enable institutions to define a comprehensive set of scenarios encompassing multiple types of shocks to variables. It supports stress testing of multiple types of variables, including numeric and categorical variables, single maturity and term structure variables. Shocks can be specified as absolute values, percentages, standard deviations or log standard deviations. In addition, curve shocks such as parallel, twist and inversion changes can be applied to the term structure variables.

Oracle Financial Services Enterprise Modeling allows multiple shocks to be defined on the same set of variables. It also provides the flexibility of defining different scenarios that capture the various levels of severity of an extreme risk event. For instance, a bank can define a scenario of mild recession as well as severe recession by applying different shocks to the same set of variables.

### Manage Scenarios with Unprecedented Flexibility

Oracle Financial Services Enterprise Modeling offers the flexibility of defining scenarios as a combination of shocks. Scenario Management enables institutions to define multiple scenarios that can be based on historical events or expert judgment. Banks can maintain a repository of such scenarios which can then be used across multiple points in time to fulfill the stress testing needs of the bank with respect to all the risks to which it is exposed.

### About Oracle Financial Services Analytical Applications

Oracle Financial Services Analytical Applications bring financial institutions best-of-breed capabilities to proactively manage Financial Crime, Compliance, Risk, Treasury, Finance and the Front Office. The applications are built upon a commonly available analytical infrastructure consisting of a unified financial services data foundation, analytical computations, , and the industry-leading Oracle Business Intelligence platform.





A single, unified data model and integrated metadata framework provides one version of the analytical "truth" to business users throughout the entire enterprise. This enables financial services institutions to confidently manage performance, governance, risk and compliance. Shared data, metadata, computations and business rules enable institutions to meet emerging business and regulatory requirements with reduced expenses and the unified platform helps financial institutions to leverage existing investments.



#### CONTACT US

For more information about Oracle Financial Services Enterprise Modeling, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.

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