

# Bank Stress Testing

*Simplifying bank stress testing for regulatory requirements*

## STRESS TESTING

### THE BACKGROUND

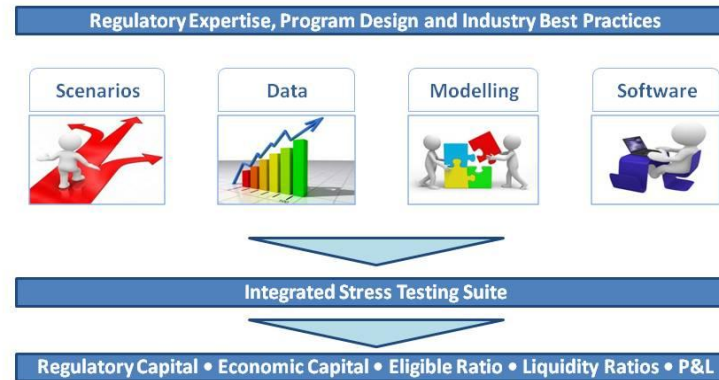
Since 2008, the banking industry has been under regulatory demand to undergo stress tests to prove sufficient capital adequacy against potential negative market events. A stress test analyses how a bank's capital might withstand unfavourable economic scenarios, using tests either carried out internally or by a supervisory authority. In Europe, the European Banking Authority (EBA) has the jurisdiction to conduct stress tests on a bank's resilience, for those operating within the EU. These type of scenarios are described by the IMF as 'unlikely but plausible' and are an outcome of the financial crisis of 2008/9, when many banks were found to be severely under-capitalised.

### THE PROBLEM

On 24 February 2016, the EBA released the macroeconomic scenarios and methodologies under which it would stress tests banks in the EU region. These stress tests aim to provide supervisory bodies, banks and other market players with a uniform, analytical framework with which to consistently compare and evaluate the resilience of EU banks against economic shocks. The EBA conducts these tests in collaboration with the European Systemic Risk Board (ESRB). Other bodies involved in the development of these tests include the European Commission and the European Central Bank. Factors considered in the stress tests include credit risk, market risk and liquidity risk.

Data management is an integral part of coping with and complying with regulations.

A Modular, Integrated and Customisable Approach to Stress Testing Program Design and Execution



### FM EBA Stress Test Suite – Summary of Benefits

- FM's Stress Test Suite empowers financial institutions to address two interconnected goals: to meet short-term regulatory demands and to embed risk in the business—from day-to-day operational oversight to long-term strategic business planning.
- CROs can use FM's Stress Test Suite to aggregate data from across the enterprise via different systems and formats, into one comprehensive view.

## FM EBA STRESS TEST SUITE

### THE SOLUTION

FM helps capital market institutions to make risk-based business decisions in the front office by actively managing the short-term sensitivities and long-term vulnerabilities of Potential Future Exposure (PFE), Credit Value Adjustment (CVA) and market risk.

Our EBA Stress Test Suite is a collection of high-quality stress test models mapped against the EBA-defined scenarios.

The EBA Stress Test suite is highly configurable, allowing clients to define multiple scenarios and satellite models against variables such as net interest income. Users then run projections of evolution against balance sheets across various time frames to assess risk.

This type of stress testing does not need to be carried out real time, but it does allow a user to run the models quickly to get a rapid output of risk. Clients can:

- Monitor model risk and performance – providing a complete inventory of models which can be verified by external bodies
- Provide a complete lifecycle audit trail – where the bank can show a history of exactly which calculations have been made and which datasets, processes, users and timescales have been used.
- Co-ordinate scenarios – banks can consolidate modelling results into balance sheets and financial statements and turn capital plans into plans for future systems and processes.

Quantitative Finance | Risk Modelling | Pricing & Valuations  
Data Capture & Normalisation |  
Analytics | Technology

## FM EBA Stress Test Suite – Key Features

### Stress Test Coverage

FM EBA Stress Test Suite allows users to stress test against all the EBA-defined scenarios, which are inbuilt upon installation. The client can then add in any scenarios it wishes to run, including newly-defined EBA scenarios or those of other authorities such as the IMF, UK's FSA Anchor scenarios or the Federal Reserve's CCAR scenarios, using the user-defined scenario functionality.

### Process

Clients can upload their internal time-series data, including factors such as funding spreads and net interest income, and then model this data against the satellite models to calculate the risk weighted assets (RWAs).

### Flexible Risk Analysis Capabilities

The system enables regulatory risk analysis on demand. This includes P&L analysis based on market, credit and net interest income risk. Sensitivity analysis is built in, along with advanced simulation-based risk analysis and counterparty risk. Due to its speed, users can produce stress testing and scenario analyses quickly and flexibly.

### Forecasting

The system can also be used for forecasting future performance and status.

### Services risk across all capital markets

The service can be used to assess risk across the full capital markets landscape, as it is not restricted to certain business areas, like some competitor services are. FM provides the single, global view required to assess risk across the organisation.

### Asset Class Agnostic

The tool does not carry a pricing library, so it can stress test against any underlying data required by the client.

### Data Neutrality

The FM suite allows users to utilise underlying data from ANY source, including third party and proprietary, thereby not tying clients into expensive data contracts.

### Delivery / Hardware

The system is co-located on the bank's internal network and therefore inside the bank's firewall. It can be integrated into existing systems or be installed as new platform.

### Software

The software is scalable to suit a client size and contains an in-memory engine. Using satellite models, the FM EBA Stress Test Suite allows rapid and thorough risk modelling with in-built rich reporting tools. It is written with user-definable, open satellite code and compatible with third party or proprietary satellite libraries. It is highly customisable, with a range of views, and interactive stress test builders. Flexible and agile, it is ready to grow with the organisation's changing needs.

### Expertise

The FM EBA Stress Test Suite team has experience in derivatives trading, quantitative financial analytics and normalising complex datasets.

The FM EBA Stress Test Suite team has in-depth knowledge of risk methodologies and scenarios.

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