

# Creating a More Efficient Stress Testing Process: 3 Components

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As long as bank regulators continue to use stress testing as an oversight tool for asset risk and capital management, financial institutions will need financial models capable of satisfying these regulatory requirements, yet agile enough to use for internal modeling.

Pooling together more than 280 risk professionals from nearly 100 global financial institutions and regulatory agencies, the Moody's Analytics Risk Practitioner Conference (RPC) generates some of the most innovative ideas for building more-efficient stress testing processes.

This annual conference deliberates best practices for centralizing the stress testing process, managing liquidity risk, and, most importantly, discovering value-added uses from the stress testing process. In fact, at the conference, a group of chief risk officers from respected financial institutions shared how a firm can maximize its return on investment in the Dodd-Frank Act Stress Testing (DFAST) process through three components:

1. Quantitative Modeling vs. Management Judgment
2. Process Changes for Improved Data Management
3. Adding Business Value Beyond Regulatory Compliance

## 1. Quantitative Modeling vs. Management Judgment

Since quantitative modeling provides a reliable and verifiable process with a complete set of data, validated models, and documented internal controls, financial institutions should administer stress testing assumptions and drivers through dynamic, quantitative models, rather than the qualitative judgment of management.

Quantitative models may be used for business and strategic planning purposes, as well as risk tolerance and loss forecasting for business lines, investments, bank profitability, and risk of loss ratios.

### A. Dual-Track Quantitative Model

One best practice solution for bank stress testing is a dual-track model, which integrates top-down (portfolio level) and bottom-up (loan level) stress models. Outputs derived from the top-down approach offer a big-picture benchmark, while the bottom-up approach delivers granular, loan-level information allowing management to precisely examine the factors driving risk in each transaction.<sup>1</sup> Once a dual-track model is in place, financial institutions can run optimization functionality to guide decision making, such as determining their

minimum Tier 1 Capital ratio and maximum bank deposits allowed to be loaned. Management's ability to more efficiently analyze the derivation of the aforementioned outputs will provide for better decision making. In addition, building Primary and Challenger models alongside the dual-track model provides banks with a benchmark comparing their firm-specific financial position to the financial services industry average.

## B. Scenario Analysis

The most important functionality of any quantitative model is to incorporate independent scenarios for the variety of assumptions required under DFAST and the Comprehensive Capital Analysis and Review (CCAR). For example, DFAST requires each bank to hold its existing dividends constant, whereas the CCAR allows planned increases to dividends, share repurchases, and capital issuances and redemptions.<sup>2</sup> In this way, financial institutions can forecast baseline, supervisory, and internal scenarios all without maintaining multiple spreadsheets. Financial institutions that already implement quantitative modelling must continually assess and improve their current process. Common issues financial institutions experience with their current models include internal process gaps and confusion over stress testing responsibilities. Since the accuracy of any financial model is dependent on the quality of the data inputs, a bank's data management process must also be evaluated to ensure the reliability of their financial models.

## 2. Process Changes for Improved Data Management

Financial institutions must establish a centralized approach to data management that will effectively streamline the stress testing process and maximize the firm's return on their stress testing process.

### A. Direct Data Integration

A firm's stress models should be directly integrated with their source systems for an efficient and centralized stress testing process.

Whether a financial institution uses a General Ledger system or a granular-level Bank-Ware system, direct integration allows for data to be updated and leveraged automatically.

In addition to establishing a single data inventory source, financial institutions should delegate the responsibility of the stress testing process to a single department. Given that fewer than 5 percent of banks perform the stress testing process within a single department, leveraging multiple departments, such as Treasury, Risk Management, and Financial Planning & Analysis during the stress testing process is a major organizational obstacle banks endure. Delegating stress testing responsibilities to multiple departments both increases data inconsistencies and elongates cycle times to complete compliance requirements. The end result is an inefficient use of time, which creates resource constraints as operational processes typically overlap with stress testing at quarter- and year-end.

To solve the inefficiencies that come with coordinating the stress testing process, banks should strive to centralize all data into one system. A centralized repository with a single department in charge of the stress testing process will ultimately streamline the bank stress testing process.

### B. Systematic Report Automation

Another source of inefficiency during the stress testing process stems from the creation of required reports and supporting documentation for compliance. U.S. regulators voiced an overall dissatisfaction at the RPC with regard to how data within reports are submitted.<sup>3</sup> To better comply with regulators, generating reports should follow a standardized process, such that every financial institution should have lights-out automation to translate internal management reports into the required federal reports. Automatic generation of DFAST, FR Y-14, FR Y-16, and other compliance reports provides efficiency gains, increases report accuracy, and alleviates resource constraints for the responsible department(s) within the bank.

### 3. Adding Business Value Beyond Regulatory Compliance

While senior management may consider the required scenarios under DFAST as too extreme to be relevant in their decision-making processes, the stress testing process nonetheless provides insight into the banks' operational and risk management strategies. Based on a survey of the RPC attendees, although fewer than 40 percent of banks currently use stress tests for operational purposes, more than 75 percent plan on upgrading their stress testing practices to address additional uses of stress testing results.<sup>4</sup>

The general consensus among banks to upgrade their stress testing process indicates financial institutions must continue to evolve their risk management process in order to merge the firm's capital planning process with the stringent expectations of regulators. The key processes financial institutions wish to upgrade are:

- Capital adequacy and planning assessments
- Risk appetite definition
- Risk management and measurement
- Limit-setting and measurement<sup>5</sup>

Most importantly, the stress testing process must be embraced as a cultural change within the firm in order to realize the added business value. The stress testing process should not be viewed as simply another responsibility tasked to the relevant department(s). Rather, financial institutions should integrate the stress testing process as a framework for conducting day-to-day operations. Financial institutions must take the initiative to gather information about their systems and process, understand solutions offered in the marketplace, and make an informed decision about which functionalities their models should possess.

### Value-Added Uses with Financial Technology

Creating financial and risk models that incorporate stress testing requirements is a difficult process that requires innovative and capable professionals. Expertise in financial technology should expand beyond building financial and risk models. Through the development of enterprise-wide analytical systems, organizations that optimize the stress testing process will not only meet DFAST and CCAR requirements, but drive decision making and discover value-added uses.

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## Key Takeaways

A firm can maximize its return on investment in the Dodd-Frank Act Stress Testing (DFAST) process through three components:

- Quantitative Modeling vs. Management Judgment
- Process Changes for Improved Data Management
- Adding Business Value Beyond Regulatory Compliance

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