



CO-CREATION LEADS TO AUGMENTED MODEL RISK MANAGEMENT FUNCTION

This is our story of co-creating a
solution with a leading U.S. bank

WNS

AS WE KNOW...

The Dodd-Frank Wall Street Reform and Consumer Protection Act requires the U.S. Federal Reserve (FED) to conduct annual stress tests of large banks. Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Test (DFAST) are outcomes of the Dodd-Frank Act.

Failure on the part of banks to comply with CCAR and DFAST leads to heavy fines. It also has an adverse impact on the brand image.

The FED established the model validation council in 2012. The council is tasked with the role of rigorously assessing the models used in stress tests by banks. These stringent norms and timelines put pressure on banks and their model risk management function.

THE CHALLENGE FOR THE BANK WAS...

It had over 200 diverse models spread across varied product categories. To comply with CCAR and DFAST requirements, the bank had to conduct stress tests leveraging its existing model validation framework and subject all its models to periodic reviews and validation.

Faced with a shortage of talent, assessing and validating the accuracy of existing models at regular intervals was a daunting task. The bank partnered with WNS to augment its model risk management function by leveraging a team of statistical experts and industry best practices.

HERE'S WHAT WE CO-CREATED AS A SOLUTION...

WNS leveraged its analytics expertise to build a sophisticated framework to validate the accuracy of models that were similar to the client's existing models. The framework entailed:

- Single and multi-step back testing
- Co-integration testing
- Sensitivity and scenario analysis

Multiple validation and scoring methods were deployed to improve the bank's modeling standards. Detailed validation reports were prepared for each model to highlight the shortcomings.

WNS performed stress testing on the models using macroeconomic variables and assessed the impact of stress scenarios on the bank's capital and profitability. The stress scenarios were in accordance with CCAR and DFAST norms, and the client's risk management policies.

In collaboration with the bank, WNS also built models for Loss Given Default (LGD) and these were used as references for the client's existing LGD model.

OUR LEARNINGS AND OUTCOMES FROM THE PROCESS OF CO-CREATION ARE...

That the models helped improve decision-making and risk management. The bank was able to discard and replace models that were not performing well. The WNS validation reports enabled the bank to


recalibrate its statistical approaches and enhance the model validation standards.

The enhanced standards have enabled the bank to comply with CCAR and DFAST submissions since 2015 with ease. WNS has also been working extensively to improve the bank's model governance through bespoke projects including:

- Grading the models based on various micro and macroeconomic conditions
- Checking the relevance of the variables used in the models
- Overall model inventory management



Analytical models helped improve risk management and decision-making



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