

# Development of a Basel II A-IRB compliant framework for facility risk assessment for a large Banking Group in the USA



# The Client

A large Banking Group in USA with a total asset size of USD 130 bn, with a network of 1,500+ branches and approximately 21,400 employees.

# Scope and Approach

The Client wanted to implement a Basel II Credit Risk Approach and required Aptivaa to develop credit rating models to predict the Loss Given Default to be used in capital computation. They also wanted to conduct a review of the preparedness for AIRB compliance. As part of which, a roadmap for compliance was developed. The development of the LGD models was a rigorous consulting effort encompassing data preparation, sampling and business user meetings. Sophisticated statistical methods were adopted to build hybrid LGD scorecards that reflected both the historical observations and the expert opinions. A challenger model was also applied to test the validity of the vended models that were sought to be deployed. Calibration of the models to downturn period was also done. Further, a guarantor framework was developed for the client covering all its wholesale portfolios. Along with the LGD models, Aptivaa also provided the bank detailed strategy packs that covered model development and portfolio compliance with regulatory guidelines.

# Results

Built 5 LGD models for the bank's corporate portfolios including Commercial Real estate – both Income producing and Construction Real estate, general corporate lending, Asset backed lending and leasing portfolios. All the necessary steps were taken to meet US final Rules and in the model build exercise

# Deliverables

- + Detailed documentation of the five LGD models developed for the Corporate portfolio
- + A new calibration framework for the LGD models
- + A guarantor framework applicable for the entire wholesale portfolio
- + A detailed strategy pack targeting AIRB compliance

The composite image displays three key deliverables:

- Process Flow Diagram:** A five-step process for LGD model development: 1. Data Collection & Model Building (100k records, 100k records), 2. Model Development (100k records, 100k records), 3. Model Validation (100k records, 100k records), 4. Model Deployment (100k records, 100k records), 5. Model Monitoring (100k records, 100k records).
- Line Graph:** A graph showing the percentage of accounts (0% to 100%) over months (1 to 12). It compares 'Actual LGD' (red line) and 'Predicted LGD' (green line), showing a rapid initial increase in LGD that levels off by month 6.
- Compliance Report Screenshot:** A screenshot of a report titled 'AIRB - 2010-2011' with columns for 'Model Name', 'Model Type', 'Model Status', and 'Model Date'. It lists several models and their compliance status.



# About Us

Aptivaa is a dedicated risk and compliance consulting firm delivering risk management solutions to the financial services industry.

We offer risk consulting, solutions and analytical services to banks, insurers, as well as asset management and other financial services companies. Our domain expertise covers risk and compliance across credit risk, market risk and operational risk.

**Aptivaa**