



**Development of
Scenarios under AMA
and assist the bank in
application for approval**

The Client

- + One of the largest Bank in India with an Asset size of over USD 70 billion
- + Bank has diversified asset portfolio covering corporate bank, retail, structured products and treasury portfolio

Scope and Approach

The client intended to reduce the capital allocated for operational risk and move to advanced measurement approach for calculation of capital under operational risk. Client required Aptivaa to

- Identify key scenarios based on internal and external events relevant to the Bank
- Develop scenario analysis story boards through research of external risk events and experience and through facilitation of discussion with risk teams and senior management
- Analyse the assumptions
- Impact level of severity, controls, mitigants, and management action for each scenario considered by the bank
- Translation of scenarios into appropriate internal business and risk drivers and macro-economic factors
- Quantification of the financial and capital impact of scenarios and determination of capital charge, both including and excluding management actions, across varying levels of severity (e.g. break-the-bank scenarios)
- Linkage of the loss data base and internal experience of the bank.

There were number of factors that were considered before determining the approach for Operational Risk Capital calculation under AMA approach in the Bank. Some of these were availability of data, design that can integrate qualitative and quantitative factors etc. The approach followed was based on the factors above which were validated during the initial phase of the project. We used a Hybrid approach (I.e. combination of Scenario analysis and loss distribution analysis) to estimate AMA capital charge for critical units / regulatory business lines. Key steps involved are as follows:

- Data collection
 - Internal, external loss data
 - External scenarios etc.
- Data Validation
- Fitting of statistical distributions for statistical impact
- Monte Carlo simulation
- Use of qualitative factors like RCSA and KRI to adjust to compute the final adjusted capital charge
- For back testing, we used the same models with the earlier loss history of the bank to compute the capital figures
- We tested the change in capital requirement by stress testing the maximum loss and frequency estimates
- Conducted a model validation for the AMA capital calculation.
- Implemented AMA capital calculation module
- Assisted the bank in applying for approval from Central Bank to migrate to AMA

Result

The Bank could apply for the calculation of capital for Advanced Measurement approach.

Deliverables

Scenario analysis for all Risk event types as defined by Basel

The composite image displays four panels illustrating the scenario analysis process and its outputs:

- Top Left Panel:** A flowchart showing the process flow. It starts with 'Data & Model & Assumptions', followed by 'Scenario analysis Template', then a graph showing a distribution curve, and finally a yellow box labeled 'Output'. Arrows indicate the sequential flow, and a double-headed arrow connects the graph and the output box.
- Top Right Panel:** A screenshot of a data table or spreadsheet, likely representing the input data or model parameters used in the analysis.
- Bottom Left Panel:** A screenshot of a report cover page titled 'Scenario Analysis Workshop Output Report'. It includes fields for 'Scenario Category' and 'Internal Fraud', and a list of bullet points detailing the report's content.
- Bottom Right Panel:** A screenshot of a report content page, showing detailed text and tables, likely representing the results and conclusions of the scenario analysis.

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.

