

Market Risk Model Validation

The Assignment

The client, an investment bank in Saudi Arabia, needed to migrate to the Internal Model approach for the measurement of market risk. In accordance to the SAMA and Basel guidelines, the bank needed to have their external models validated by a competent agency before applying for migration.

Our Solution

The project involved the study of various FX, Interest rate, Commodities and equity products (including derivatives) which were being traded by the bank. Once the list of products was identified, our team then categorized at each product level to compute the risk at the market factor level and at the portfolio level.

The Model Validation Process involved building stand-alone models for each traded product for the calculation of factor sensitivities and Value at Risk (VaR) separately. In addition, the bank's market risk management was validated on the following criteria

- General criteria
- Qualitative Standards
- Market Risk Factors
- Quantitative Standards
- Stress Testing
- External Validation

This project also involved the validation and implementation of the Market risk model which needed to be compliant with the internal models approach of the bank.

The results obtained from the exercise were then presented to the Bank's Risk Management team and discussed.

Subsequently, the application to SAMA to grant permission to move to IMA was developed.

Takeaways for the Client

Based on the validation tests, it was concluded that the models implemented by the bank were making relevant and appropriate calculation of VaR numbers. The models were determined to be conceptually accurate and adequately capturing all material risks. The formulae used in the internal models were determined to be conceptually correct and implemented with integrity. It was confirmed that the bank was in compliance with the quantitative and qualitative requirements for the adoption of internal Model approach for the measurement of market risk.

ASSIGNMENT DETAILS

- ▲ **SECTOR**
BANKING
- ▲ **DOMAIN**
RISK MANAGEMENT
- ▲ **GEOGRAPHY**
MENA
- ▲ **PROJECT DURATION**
3 Months