



Capgemini Risk Management & Compliance

**Bringing tangible results to the world's leading
financial services companies**



Improving Reporting Through a Basel II Business Intelligence Solution	3
Enhancing Regulatory Capital Settlement and Reporting	3
Improving Risk Management and Lowering Capital Costs	4
Improving Loss Forecasting and Capital Allocation Predictions	4
Greater Efficiency Thanks to Improved Credit Management System	5
Comprehensive Institutional Market Risk Measurement Solution Identifies Risk Exposure Across all Trading Areas	5
Proactively Managing Credit Risk Information Across the Enterprise to Create Value	6
Managing Credit, Operational and Market Risk Effectively	6
Improving Operational Efficiencies in Fraud/AML Detection and Investigation	7
Sharing Intelligence Across the Organization with a Leading Consolidation and Reporting Solution	7



Capgemini Financial Services offers a set of integrated business and technology services to control, manage and predict risk. We offer unparalleled intellectual property which accelerates projects and time to market while reducing costs and risks.

Improving Reporting Through a Basel II Business Intelligence Solution

Business Issue

The client had determined their Basel II approach, developed and deployed internal risk rating models and defined a group wide framework for pillar 1 and 2 calculations (RWA, EC).

Each business unit was required to implement an IT solution compliant with the group framework. The client needed to:

- Develop the IT solution by defining data requirements and implementing a data warehouse.
- Embed the Basel II reporting process with local country units.

Capgemini's Solution

The Capgemini team partnered with the client to setup, manage, and deploy the Basel II program. Key Tasks:

- Set up head office project organization, involved group staff and other local country units, and set up local projects.
- Defined phased approach, performed gap analysis, and determined data sources.
- Decided on functional, technical, and data architecture.
- Built data warehouse solution (IBM Banking Model) and connect to RWA calculator (Fermat).
- Defined and build reporting structures / templates.
- Worked with Group Risk to define and gradually improve acceptance criteria.

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Implement a Basel II Business Intelligence solution with a customized RWA calculator and

centralized data warehouse used for data collection, validation, and integration.

- Increase commitment and knowledge of global and local staff around Basel II across the organization.

Enhancing Regulatory Capital Settlement and Reporting

Business Issue

The client aimed to setup an environment enabling all entities under banking supervision to determine their regulatory capital and to produce the associated regulatory reporting.

The client need assistance with implementation of FERMAT to improve risk management processes.

Capgemini's Solution

The Capgemini team partnered with the client to deliver a seven-phased approach. Key Tasks:

- Provided a current state assessment of the organization's roles and responsibilities, processes and standards.
- Developed both general specifications and detailed design considerations for interfacing and FERMAT parameter setting.
- Created a comprehensive test strategy for Data Processing tests and executed test plans to ensure the success of FERMAT-related activities.

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Identify the objectives, activities, and risks of the project, as well as prepare for FERMAT implementation across the organization.
- Significantly improve risk management practices with enhanced portfolio management, better diversification, and organizational awareness.



The benefits of enterprise risk management (ERM)—and particularly the data and information that form its foundation—have become especially clear since the financial crisis.

Improving Risk Management and Lowering Capital Costs

Business Issue

The retail business of the bank was looking to become Basel II compliant, to improve risk management and lower capital charges. The client needed to:

- Promote organizational awareness around Basel II and Risk Management
- Develop risk models for all portfolios, and enhance operational performance using those models.

Capgemini's Solution

The Capgemini team partnered with the client to perform a Basel II Compliance Scan to determine the impact of Basel II on the organization. Key Tasks:

- Model development for PD, LGD, and EAD on several areas, including: residential mortgages, revolving credits, installment loans, and small business entities.
- Develop Economic Capital models to implement Pillar II ICAAP requirements
- Implementation of a Data Warehouse and Management Information System

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Increase commitment and knowledge around Basel II across the organization
- Develop reliable F-IRB compliant risk models for PD, LGD and EAD
- Develop a Credit Risk Data Warehouse with Basel II data models
- Maintain a Credit Management Information System with yearly measurements of realized PD's and LGD's, portfolio management, enhanced diversification, and improved efficiency of operations

Improving Loss Forecasting and Capital Allocation Predictions

Business Issue

The client faced challenges with its data management and report generation approach. These difficulties included a lack of quantitative models to estimate losses forcing reliance on expert judgment, unmanageable exposure limits across portfolios, and decentralization of their systems.

The client needed to improve accuracy and consistency around the data used for predicting losses and capital allocation.

Capgemini's Solution

The Capgemini team partnered with the client's CCRM team representatives to evaluate the existing information management scenario and recommend a better approach. Key Tasks:

- Data integration of client LOB's for a full and complete view of client portfolios.
- Development of a credit data mart for the CCRM department for effective forecasting and predicting accurate loss figures.

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- See an additional \$800k of income due to improved predictive models for loss predictions and resulting in less capital getting allocated for exposures.
- Gain greater insight around customer behavior and relationships.
- See an estimated earnings benefit of \$684k/year due to greater precision around estimating PDs, LGD and other parameters along with more accurate pricing models.

Greater Efficiency Thanks to Improved Credit Management System

Business Issue

The current process of Bank's credit assessment was manual and had the following problems:

- Lack of centralized information
- Dashboard slowed the process
- Heavy reliance on phones and emails
- High risk of credit limit breach
- Non compliance to BASEL-II norms

The client needed to:

- Build an information repository and reporting system to incorporate diverse data for various risk management
- Build a credit approvals system

Capgemini's Solution

Capgemini collaborated with the client to build a scalable and flexible CARM system. Key Tasks:

- Implemented the system in forty countries in less than seven months
- Automated Credit Assessment, Limit Check and Credit Approval
- Integrated with systems developed under the Credit & Finance Strategic Systems Development Program
- Integrated with global customer database, homegrown rating systems and external credit rating agency databases
- Provided Inbox and Proxy access to help RMs work efficiently

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Reduce time to review application from a few days to 20 min
- Improve operational efficiency by integrating with other systems
- Reduce expenses
- Reduce the reserved ratio requirement from 9% to 3% by conforming to BASEL-II standards

- Have a potential of \$270 million in benefits against \$80 million in cost
- Reduce efforts with controlled processes

A Comprehensive Institutional Market Risk Measurement Solution Identifies Risk Exposure Across all Trading Areas

Business Issue

The regulation mandates that the bank uses an internal model to calculate Value at Risk (VaR) and certain other measures to show possible losses in trading positions due to market movements in interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices.

For this the Client required:

- A data-driven system architecture grounded on a robust meta data.
- Integrated historical and current market risk factors sufficient to account for interest rate, foreign exchange rate, equity price, commodity price, and credit spread risk, according to the MRA and Bank's standards.
- Integrate position data sufficient to characterize and value all the covered positions pursuant to the MRA, as well as additional positions for market risk measurement

Capgemini's Solution

Capgemini collaborated with the client to establish a roadmap that integrates with existing IT data warehousing initiatives and chosen tool sets.

Key tasks:

- Defined requirements for calculation of market risk-based capital and regulatory capital through daily VaR and valuation methodology combining quadratic approx and full valuation techniques to allow cost effective, efficient solution

- Outlined risk measures that properly take into account correlations among positions, LOBs, risk factors and risk factor types
- Prototyped comprehensive suite of risk reports
- Defined framework for stress and scenario testing
- Defined Back testing Regime

Results and Value Delivered

Capgemini's solution enables the client:

- Quantify and analyze risk exposures better
- To reduce and optimize ad hoc processes currently used in risk reporting.
- To establish foundation to reduce ERM reliance on LOB risk processing.

Within the last two years, Capgemini has delivered over 500 risk and compliance projects and 100 Basel projects.

Regulators want banks to see the whole risk picture across their firms.

Banks must use those firm-wide insights to drive improvements to govern risk, make better business decisions, maximize returns from risks, and minimize the losses.

The benefits to the business, operations, the balance sheet, and shareholders are tangible, but most banks still have a considerable amount of work left to do.

Proactively Managing Credit Risk Information Across the Enterprise to Create Value

Business Issue

The Bank needed to frequently monitor credit portfolios to provide pertinent information to senior management to include in the capital management process.

The client required to:

- Track default/loss data to capture experience over time
- Improve ability to calibrate estimates with actual default/loss experience

Capgemini's Solution

Capgemini collaborated with the client to develop a Default Loss Data Repository (DLDR). Key tasks:

- Created Monitoring reports like Variable Deviation Index and Cross Tab reports
- Performed analysis on the Baseline and Actual period of data
- Designed reporting parameters while helping the client identify all the risk drivers
- Defined the process of creating audit, balance and controls from the Account level data repository

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Generate the Basel Monitoring reports with forward looking and backward validating.
- Receive alerts on the fundamental changes in default rates as defined by Basel
- Test the ability of predictive models to effectively discriminate credit risk

Managing Credit, Operational and Market Risk Effectively

Business Issue

Client required:

- A comprehensive, transparent and tractable economic capital framework to help identify and monitor risk and also indicate hedging strategies against various risks
- A data model that should be scalable and can be added on to the credit risk database in the future with the company expansion.

Capgemini's Solution

Capgemini collaborated with the client to recommend a modular project, with models being delivered as Credit risk, Market Risk, Interest Rate Risk, Operational Risk, and Liquidity Risk. Key tasks:

- Designed a solution based on the Basel II pillar-I capital formulas.
- Mapped Bank's portfolio to the Basel II product types and applied the formulas
- Developed models SAS Risk Dimension and the ETL/data transfer in Oracle database environment.

Results and Value Delivered

The solution provided by Capgemini provided the client with:

- A comprehensive model to implement the economic capital framework
- Manage the credit, operational and market risks effectively

Improving Operational Efficiencies in Fraud/AML Detection and Investigation

Business Issue

The client had existing loss prevention/control methods for fraud detection that were principally manual and reactive in nature, and largely dependent on the customer informing the Bank of a loss situation. The financial risk was growing at a rate of approximately 120% annually.

The client needed assistance in building a fraud detection infrastructure to provide the Bank with the technical infrastructure and business processes to mitigate the increasing number of fraudulent transactions

Capgemini's Solution

The Capgemini team partnered with the client to develop a scalable infrastructure, targeted to detect debit card skimming, account takeover, and deposit account fraud. The solution was designed with Anti-Money Laundering (AML) regulations in mind. Key Tasks:

- Redesigned internal and external processes to increase their ability to detect and manage potential exposures.
- Developed a Detection System to receive static data and transaction data from existing banking system feeds.
- Addressed batch and near real-time functionalities as well as branch and e-banking operations.

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Increase visibility into the risks posed by Fraud and Money Laundering.
- Reduce the Bank's loss exposure against market trends, such as growing fraud losses.

- Decrease the time gap between fraud occurrence and fraud detection, enabling the Bank to achieve improved operational efficiencies in Fraud/AML detection and investigation.
- Gain flexibility to adapt to changing regulatory requirements.

Sharing Intelligence Across the Organization with a Leading Consolidation and Reporting Solution

Business Issue

The client was faced with an aging financial consolidation system that could not meet new Basel II requirements.

- The legacy system was unable to keep track of the organization's many subsidiaries.

The client needed to:

- Extend current reporting with Basel II information.
- Introduce extensive Basel II calculations and automated reporting capabilities.
- Enhance organizational awareness.

Capgemini's Solution

The Capgemini team partnered with the client to create an overall solution architecture to satisfy all operational, functional, and technical requirements. Key Tasks:

- Introduced a centralized data warehouse containing all base financial and risk related information.
- Selected and implemented one of the world's leading consolidation and reporting tools (Outlooksoft).
- Selected and introduced a middle layer, allowing for automated business process management and integrated workflow (Cordys).
- Introduced a front-end reporting system, allowing for business users to run their own reporting.

Results and Value Delivered

The solution provided by Capgemini enabled the client to:

- Maximize the effectiveness of the solution and maintain a constant insight into the end solution, creating a clear vision and goal, improving on overall focus, planning and communication to the stakeholders.
- Achieve reduction in reporting time from 10 days to 1 day.
- Maintain an integrated data warehouse to ensure full reconciliation of all data and consistent reporting practices.

Capgemini's risk and compliance network includes over 400 experts and 1,800 business intelligence specialists.

To learn more about Capgemini's Risk Management and Compliance services, contact our Center of Excellence at riskandcompliance.fsgbu@capgemini.com.



About Capgemini and the Collaborative Business Experience

Capgemini, one of the world's foremost providers of Consulting, Technology and Outsourcing services, has a unique way of working with its clients, called the Collaborative Business Experience.

Backed by over three decades of industry and service experience, the Collaborative Business Experience™ is designed to help our clients achieve better, faster, more sustainable results through seamless access to our network of world-leading technology partners and collaboration-

focused methods and tools. Capgemini utilizes a global delivery model called Rightshore® which aims to offer the right resources in the right location at competitive cost, helping businesses thrive through the power of collaboration.

Capgemini reported 2009 global revenues of EUR 8.4 billion and employs over 90,000 people worldwide.

More information about our services, offices and research is available at www.capgemini.com.