

Credit Risk Advantage

A Risk Advantage Solution from SAS and Teradata

Business Challenges

- Measuring and managing regulatory credit risk requires transaction-level data – which is not always readily available – in order to capture the performance characteristics of each credit in the portfolio.
- Financial services firms must be able to quickly source data for an enterprise data warehouse that can support credit risk at the required level of granularity, as well as myriad other analytical and business uses.
- Financial services firms need to produce nontraditional credit risk measures – such as RAROC, economic capital or other risk/performance measures – in order to incorporate risk information into everyday decision making.

As part of the SAS and Teradata Risk Advantage Program, Credit Risk Advantage includes a Teradata Risk Data Warehouse and SAS® Credit Risk Management for Banking, an integrated, best-of-class solution that supports modern risk management best practices for data management and governance combined with pre-configured risk measure calculations for regulatory and nonregulatory credit risk measurement and management.

Credit Risk Advantage is the only solution available today that integrates an authoritative and comprehensive data environment for credit risk with industry-leading risk analytics to provide a flexible credit risk analysis environment that not only meets current requirements, but also provides a framework that will support future requirements.

Superior data integration

The solution's underlying data model, integrated with the Teradata Risk Data Warehouse, helps firms consolidate data from disparate sources and supports faster implementation with greater transparency for risk information.

Robust risk measure calculation

As part of the solution, SAS Credit Risk Management for Banking enables quick, accurate calculation of critical risk measures – e.g., credit migration, risk-weighted assets and regulatory capital – from a compliant data environment for risk.

Flexible reporting

After the analyses are complete, customizable templates enable reports

to be published to the Web, stored as PDFs or integrated within desktop applications. Flexible reporting capabilities enable managers to quickly identify problems and meet regulatory requirements related to credit risk.

Audit and system transparency

All regulators and rating agencies that follow Basel II regulatory approaches as best practices require regular, independent reviews of their overall risk management processes, including: consistency, timeliness and reliability of data; the integrity of risk assessments provided by a bank's internal systems; and the validation of any significant change in the risk measurement process.

Key benefits

- **Flexibility.** Allows for system evolution, so you can think big, but start focused.
 - o Anticipate and respond with agility to future regulatory changes.
 - o Adjust to local/regional regulations.
 - o Anticipate future modeling methodologies.
- **Integration and data governance.** Enables seamless integration of your risk data, measurement and reporting systems.
 - o Integrate SAS Data Integration Studio and SAS/ACCESS® Interface to Teradata technologies for data management and integration with Teradata.
 - o Seamlessly integrate with other SAS or Teradata solution components.



- **Transparency.** Promotes greater transparency and minimizes costs through open systems architecture.
 - o No hidden system files or black-box models.
 - o All the data and intermediate steps of calculations can be archived, accessed, audited and validated in the future for supervisory and internal review requirements.
- **Minimal project risk and reduced implementation time.** Reduces both implementation time and project risk with predefined regulatory environment and sample reports.
 - o A data model, along with a predefined analytical and reporting processes.
 - o Enhanced scalability and robust performance.
 - o A transparent and robust system that documents all relevant data and processes so they can be easily accessed and validated to meet supervisory requirements.

About SAS and Teradata

SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market. Since 1976, SAS has been giving customers around the world THE POWER TO KNOW®.

www.sas.com

Teradata is the acknowledged global leader in data warehouse innovation and analytical solution development. Simply put, Teradata solutions make companies smarter and give them the competitive advantage to win.

www.teradata.com

Key Features

Risk data infrastructure

- SAS Detail Data Store for banking is calibrated to reflect bank-specific and regulatory data requirements.
- The Teradata Financial Services Logical Data Model (LDM) is the only integrated data model that supports retail and commercial banking, brokerage, investment, charge card and insurance.
- The Teradata Financial Services LDM, enhanced with credit and market risk management extensions and business-line functional views, offers firms a blueprint for structuring banking organizational data.
- The SAS Risk Reporting Repository stores results and historicizes data; the data model incorporates support for audits.

Risk data management

- SAS Credit Risk Management for Banking uses all the power, scalability and wealth of data management functionality of SAS Data Integration within the SAS®9 platform.
- Teradata's powerful suite of technology platforms and solutions, along with a wide range of data management applications and robust data mining, help organizations use data in imaginative new ways to gain maximum value.

Regulatory calculations

- Facilitates requirements for Basel I.
- Basel II/CRD regulations:
 - Delivers IRB capital requirements for the following asset classes: sovereign, bank, corporate, equity, securitization.
 - Delivers capital requirements for equity exposures based on: market-based approach, simple risk-weight method and internal models method; probability of default (PD)/loss given default (LGD) approach.
 - Delivers capital requirements for securitization exposures based on: standardized approach; IRB – Ratings Based Approach (RBA); IRB – Internal Assessment Approach (IAA); IRB – Supervisory Formula (SF).
 - Delivers capital requirements for purchased receivables based on: purchased retail receivables; top-down approach; purchased corporate receivables; receivables pool – top-down approach; individual receivables – bottom-up approach. Irrespective of the approach chosen, risk weights for purchased receivables under IRB are calculated for both default risk and dilution risk.
- Supports preconfigured capital calculations for the following transaction types: loans and deposits; repos; securities; forwards; swaps; credit risk mitigants; securitization.
- Supports stress tests.
- Supports regulatory netting treatment.
- Supports mitigants either by using the optimal allocation algorithms or by using user-specified rank orderings.
- Supports credit risk management across multiple jurisdictions.

Audit and system transparency

- System transparency for auditors and supervisors.
- Regulatory capital calculation: includes mapping tables that allow users to configure the regulatory capital calculations at the bank level. All the mapping tables contain date information defining the time range the mapping information is valid; this functionality delivers a specification history, which enables the user to fully reproduce past results for audit trail purposes.
- Robust risk reporting: offers a robust SAS Risk Reporting Repository to store referring analysis output. By default, offers audit and historization capabilities.



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