PRODUCT DATASHEET

BoundaryRider
Basel II Capital

Incorporating both the Standardised and the Internal Model Approaches BoundaryRider provides integrated Market Risk and Credit Risk regulatory capital calculations. BoundaryRider calculates robust and realistic EPE values for financial securities and derivatives.

MARKET RISK CAPITAL CALCULATIONS

BoundaryRider Market Risk performs calculations for Value-at-Risk (VaR) and Stress Testing to produce regulatory capital numbers for market risk using either the Standardised Approach or the Internal Model Approach.

The standardised approach uses net positions and maturity ladders to generate overall market risk exposures suitable for reporting to regulators. The reports come in several different forms and can be easily customised to meet any local variations.

The internal model approach is supported through the calculation of VaR via parametric, historic simulation and/or Monte Carlo simulation techniques. These results are fully configurable for horizon period, confidence interval and for sub-portfolio slicing and dicing. Back-testing and limit management is fully supported.

A fully flexible stress testing capability allows statutory and in-house stress tests to be easily configured and applied across any or all portfolios.

CREDIT RISK CAPITAL CALCULATIONS

Credit risk regulatory capital calculations can be done using varying levels of sophistication. The Current Exposure Method (CEM) is the simplest and corresponds to the existing Basel I requirements, thus allowing for backwards compatibility and comparisons. The Standardised Approach is a more sophisticated methodology based on exposure calculation via risk positions that require detailed data management for accuracy in determining categories, risk types and net positions.

The Internal model approach requires simulated values for Exposure At Default (EAD) and BoundaryRider offers a range of techniques for doing these calculations from highly accurate deterministic estimates through to full Monte Carlo simulation.

The EPE calculations are based on full forward valuation across scenarios and time to maturity, providing a consistent measurement framework for the entire trading book. BoundaryRider also takes into account all forms of credit risk mitigation permitted under Basel II, such as netting agreements, credit derivatives and collateral service agreements.

PRODUCT COVERAGE

The BoundaryRider Vectorised Pricing Library has hundreds of financial functions for valuing financial securities and derivatives. The library is vectorised and benefits from the latest high performance computing techniques. Products include:

- FRAs, Swaps, Vanilla and Exotic IROs
- Notes, MTNs, Bonds
- FX Forwards, Vanilla and Exotic FXOs
- Equity and Commodity derivatives
- Credit Derivatives
- Futures

TECHNOLOGY

BoundaryRider is an n-tier solution consisting of:

- Windows GUI interfaces targeted at specific user groups
- A central risk engine written in C++ for speed. The risk engine exposes web services that are called by the application server to perform capital calculations.
- An open and logical RDBMS data model (using Microsoft SQL Server) that captures all static data, trades and market rates and maintains an audit trail of activity in the system.

Microsoft CERTIFIED Partner

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