Risk Master

A Multi-Asset Class Risk Engine

Risk Master provides:

- **Customization and flexibility,** enabling the valuation, simulation and reporting of assets and risk factors tailored to specific requirements.
- **Coverage of multiple asset classes and risk perspectives** across an extensive range of risk factors, asset classes and investment strategies
- **Scalable risk management and reporting,** enabling firms to focus on primary business activities.

Risk Master, a fully-featured and flexible risk management solution, allows firms to intelligently assess risk across an entire portfolio or at the trade level. This powerful tool works for multiple asset classes. It allows clients to control their risk exposure to both market and counterparty risk, and to quickly act upon any risk tolerance breaches the solution identifies, facilitating better enterprise-wide decision making.

Multi-Asset Class Coverage

From vanilla instruments to exotics, Risk Master supports a broad list of asset classes, including Equity, Fixed Income, Credit, Foreign Exchange, Commodities. Clients monitor and analyze Value-at-Risk to better manage their risk intraday. There are predictive tools that use historical data and changing variables to model portfolios, allowing firms to further identify and mitigate their risk exposure. Risk Master also delivers sensitivity analysis for including matrices for Interest Rate and Credit Spread exposures.

Multiple Delivery Options

Risk Master is highly scalable, supporting a firm's growth, and is available via ASP or deployed in the clients trading and risk infrastructure. For either delivery method, clients will benefit from the platform's managed data service and data warehouse capabilities.

An Integrated Solution

Fully integrated with the industry-leading Numerix® CrossAsset Library, Risk Master is delivered with cleansed reference data and the ability to integrate with client specific models as needed. Numerix® CrossAsset Library can price and model any instrument using the industry's most advanced calculations. Its quantitative analysts have developed proprietary methods that represent an industry best-practice in speed and accuracy, enabling rapid calculations for even the most complex instruments. In addition, the Numerix hybrid model framework produces accurate valuations for instruments consisting of multiple underlying through joint calibration and incorporating multiple stochastic processes.

Know Your Market and Credit Risk Exposure

Advanced risk management tools combined with multi-asset class data to analyze risk exposure across markets, trades, counterparties, and portfolios.

Risk Master monitors market and credit risk exposure. This allows firms to price and model any instrument using our powerful analytics. The solution provides a consistent valuation framework for pricing and hedging complex portfolios.

Scenario Analysis

- Analyze the impact of deterministic scenarios, by shifting market inputs such as price, currency rate, yield curve, volatility surface
- Use historical data to generate scenarios
- Deploy predictive analysis to allow the client to define shifts in core market variables. The Risk Engine then propagates to the market environment via multiple linear regression

Broadridge®

Asset Class Coverage

Vanilla Rates
Swaps/Swaptions, Caps/Floors, Forward Rate Agreements, Amortizing Swaps

Fixed Income
Fixed Coupon Swaps/Bonds, Basis Swaps, Power Reverse Dual Currency Notes, CMS-Linked Swaps/Bonds, Range Accruals, Zero-Coupon Swaps, Callable Zero-Coupon Bonds/Swaps, CC Spreads, CC Chooser TARNs, Inverse Floaters, FX Digital Floaters, FX-Linked TARNs/Inverse Floaters, Rainbow Swaps/Bonds

Credit
CDS, CDS Options, CDS Indices, CDS Index Options, Single-tranche CDOs, CDO Tranche Options, NTD

Equity
American Options, European Index Options, Compound Index Options, Dividend Swaps, Variance Swap, Index Futures, Performance-Linked Swaps/Notes, Custom Equity-Linked Notes/Swaps, Hybrid Index Corridor Option

Equity Baskets
Basket Notes with Knock-Out, Custom Equity Basket-Linked Notes/Swaps, Best-of/Worst-of Basket Options

FX
Swaps/Forwards, Non-deliverable Forwards/Options, European Options (Fade-In/Fade-Out, Barrier), Bermudan Fade-In Options, Accelerators, FX TARNs, Digital Range Accrual with Knock-Out, Custom FX- and FX-Basket-Linked Notes/Swaps

Inflation
Custom Inflation-Linked Notes/Swaps

Exchange Traded
Government Bond Futures, Short Rate Futures

Custom Derivatives
Callable Path-Dependent Products, Structured Products

Sensitivity Analysis

- Identify concentrations of interest rate and credit spread risk and focus on minimizing (or exploiting) such concentrations
- Aggregate sensitivity for any portfolio to each tenor point on each yield or credit curve
- Calculate portfolio sensitivities to equity prices and FX rates
- Greeks

Value-at-Risk

- Calculate VaR and Stressed VaR intraday (including marginal, incremental, component, conditional [ETL/ES])
- Perform calculations on any set of positions and portfolios
- Historical and Monte Carlo methods supported
- Calculate marginal, incremental, component, conditional VaR and volatility/variance

Credit Valuation Adjustment (CVA)

- Calculate VaR and Stressed VaR intraday (including marginal, incremental, component, conditional [ETL/ES])
- Perform calculations on any set of positions and portfolios
- Historical and Monte Carlo methods supported
- Calculate marginal, incremental, component, conditional VaR and volatility/variance

Credit Valuation Adjustment (CVA)

- Quantify future exposure by assessing credit quality of counterparty, and translating this exposure into a credit charge (CVA)

Potential Future Exposure (PFE)

- Estimate the loss if counterparty defaults at some time in the future

Back-Testing

- Test the validity of VaR calculations versus portfolio P&L using both clean and dirty methods

Flexible On-Demand Reporting

Risk Master offers a flexible risk-reporting tool that supports regulatory compliance and enables risk-informed investment decision-making, through valuable insights and analytical tools. Firms can choose from an extensive list of reports, including all risk measurements plus portfolio mark-to-market and P&L reports. Configuration of any report is highly flexible allowing clients to select the market data to be used, pricing policies to be applied, etc.

The Complete Solution

Powered by High Quality Data

Consistent high-quality data is crucial to the viability of any risk platform. Our data management experience ensures that we can capture/manage full trades, positions, and all reference data feeds to support a risk infrastructure that lowers the total cost of ownership.

Grid computing functionality

With Risk Master and Grid Computing functionality for high computational performance, along with a GUI built specifically for trade capture, the system takes you beyond the limits imposed by the Excel application interface.

Flexible Deployment

Our scalable, future-proof platform is implemented with distributed architecture based on the Microsoft.NET framework to manage various deployment possibilities—from single-user to enterprise-wide rollouts.

Broadridge®

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