

Advanced structured finance analytics in IBM Algo Risk Service

ICE Data Services BondEdge is now offered under IBM Algo Risk Service and delivers advanced mortgage-backed securities and collateralized mortgage obligations analytics.



Highlights

- IBM data partners help strengthen data acquisition, financial modeling and analytics solutions
 - More accurate risk measurement of fixed-income structured products
 - Absolute and relative portfolio risk measures available
 - Instrument-level, detailed drilldown
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Accurate valuation and prepayment analysis are critical to fund managers investing in structured fixed-income markets. Stakeholders must be confident that primary and secondary risks are accurately covered with dynamic and proven modeling techniques. Analytics on structured fixed-income securities from BondEdge®, which is supported by over 30 years of expert research, is now being made available to IBM® Algo Risk® Service clients.

Diversified, multi-asset class investing can often lead to a compromise in performance standards, as resources are stretched to cover an increasingly broad and complex investing universe. IBM Algo Risk Service allows asset managers to perform high-level risk analysis while retaining the ability to drill down and examine instrument-level performance and contributions.

Our award-winning portfolio risk system now offers structured fixed-income analytics from BondEdge



Powerful modeling techniques combined with multi-asset portfolio risk

Risk management and data management processes can monopolize an investment firm's operations with complex validation of model, data and results.

IBM Algo Risk Service aims to reduce these costs without compromising model integrity or data quality.

IBM's collaboration with Bondedge, allows for sophisticated model choices, pricing and market data.

Market experience and a powerful research team

BondEdge provides investment professionals with the tools to manage risk and returns for multi-asset portfolios relative to an array of leading indexes and liability benchmarks.

These tools are backed by a set of best-in-class¹ security, portfolio and cash flow analytics, which are supported by more than 30 years of expertise and research.

BondEdge features a rich collection of content, models and analytic engines, which include a comprehensive structured finance deal library, term structure and prepayment models, and an industry-leading cash flow engine.

More than 400 banks, asset managers, insurance companies, pension funds and brokerages rely on BondEdge analytics for portfolio and risk management.

Methodology

Market-tested methodology

BondEdge provides cash-flow modeling capabilities using both proprietary and industry-accepted prepayment and option models and a complete structured finance deal library.

Structured finance deals are covered and maintained by the BondEdge Structured Finance department using primary sources and supplemental market information. As of September 2016, the BondEdge database of over 16,000 deals included securities from the agency/GSE CMO population, private label (whole loan) CMOs and ABS deals.

BondEdge uses detailed historical pool-level prepayment and loan characteristics and actively follows macro-economic and market activity.

A Heath-Jarrow-Morton interest rate framework is employed within BondEdge as the underlying single-factor, mean-reverting Gaussian process.

All non-path-dependent securities use an implicit finite differences grid with a Crank-Nicholson scheme, while path-dependent securities use a proprietary Monte Carlo framework.

Combining best-in-class portfolio management and risk solutions for today's volatile markets

Can be easily integrated and is consistent with other asset-class models

- Mortgage-backed securities and collateralized mortgage obligation returns are modeled through first- and second-order sensitivities based on the same market factor scenarios used in other parts of the portfolio.
- The sensitivity model is recalculated daily and updated into the IBM Algo Risk Service Managed Data Service environment.
- Advanced scenario-based assumptions, either stochastic, deterministic or stress tests, can be studied alongside parametric risk results.
- Absolute and relative analysis capabilities. Fully compatible with what-if, virtual portfolio, virtual benchmark construction features.
- Drilldown, attribution, decomposition and optimization, both parametric and non-parametric measures are available.
- Analytics such as value-at-risk, and tracking error, can now be determined consistently across asset classes, with prepayment risk incorporated into the simulation, alongside conventional and exotic fixed income products, common stocks, foreign exchanges, commodities, credit products and other risk types.

About IBM Analytics

IBM Analytics software delivers data-driven insights that help organizations work smarter and outperform their peers. This comprehensive portfolio includes solutions for business intelligence, predictive analytics and decision management, performance management, and risk management.

Analytics solutions enable companies to identify and visualize trends and patterns in areas such as customer analytics, which can have a profound effect on business performance. They can compare scenarios, anticipate potential threats and opportunities, better plan, budget and forecast resources, balance risks against expected returns and work to meet regulatory requirements. By making analytics widely available, organizations can align tactical and strategic decision-making to achieve business goals. For further information, please visit: ibm.com/analytics.



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Route 100
Somers, NY 10589

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- 1 BondEdge was named a best-in-class solution in CEB TowerGroup’s 2013 Portfolio Modeling and Risk Analytics Technology Assessment.



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