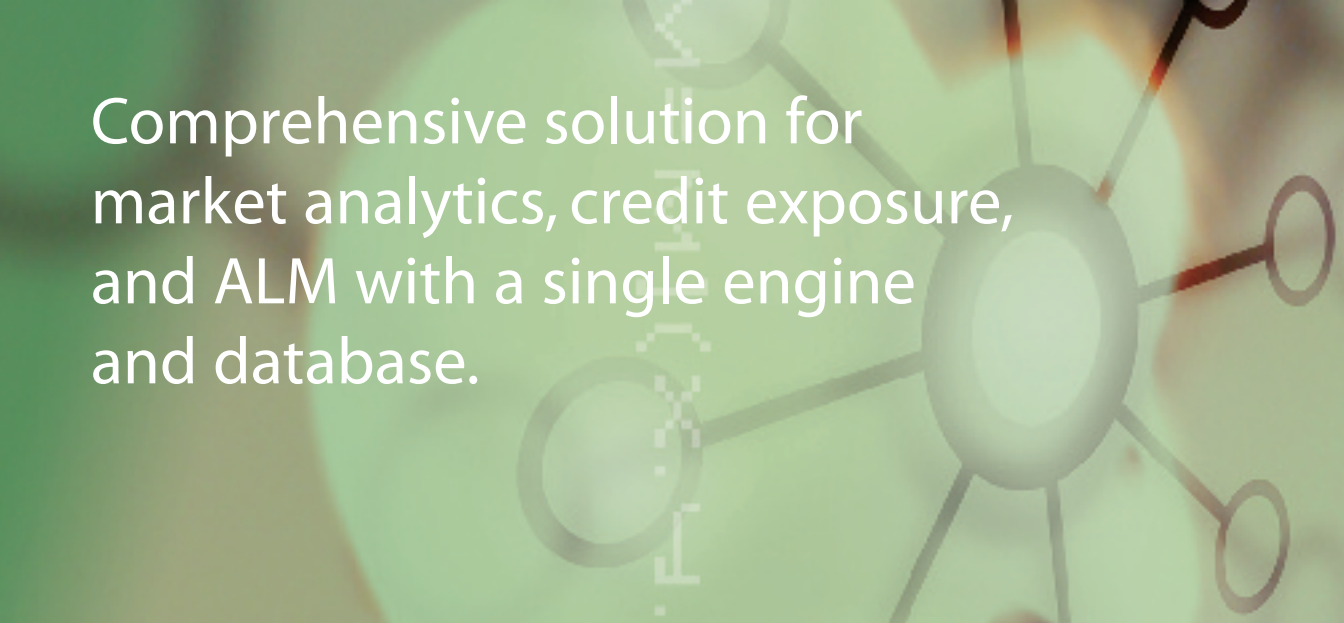


# SINGLE ENGINE FOR MARKET RISK, CREDIT RISK AND ALM ANALYTICS FOR BANKS



Algorithmics





# Comprehensive solution for market analytics, credit exposure, and ALM with a single engine and database.

Scenario-based simulation

Portfolio and counterparty aggregation

Portfolio optimization

Dynamic balance sheet projections

Stress testing

Sensitivity analysis

Value-at-risk (VaR)

Potential future exposures (PFEs)

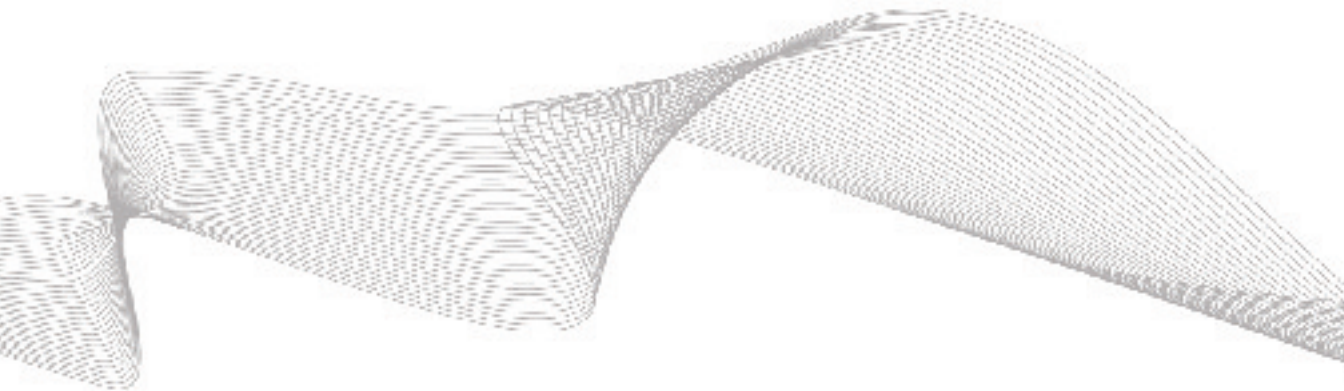
Earnings-at-risk (EaR)

Cashflow-at-risk (CaR)



## SINGLE ENGINE FOR MARKET RISK, CREDIT RISK AND ALM ANALYTICS FOR BANKS

Spanning both the trading and banking books, Algorithmics' solution for market risk, credit risk, and ALM helps organizations improve the consistency of valuations, supports better decision making, and can reduce the associated costs of installation and maintenance. The solution's unified data architecture enables banks to access comprehensive instrument coverage, multi-step simulations, and high-performance analytics, including stochastic exposures.



# From compliance to value creation:

## The changing role of enterprise risk management

Financial institutions are managing a greater number of products, services, and market channels than ever before. The evolution of complex, global markets has resulted in larger transaction volumes, and a corresponding growth in the need for market information. Banks have managed to keep pace with these industry changes by broadening their investment, funding, risk taking, and risk mitigating choices, in large part due to rapid innovations in the quantification, valuation, and tradeability of risk.

As a discipline, risk management is also undergoing changes. Shareholder demands and regulatory requirements are pushing financial institutions away from compliance-based risk policies towards the management of value creation across the enterprise. And while technology and infrastructure undoubtedly play a part in this equation, the biggest challenge for banks seeking an ERM policy is finding a framework that contains the right tools for each individual's function, while maintaining a common language around risk.

Algorithmics offers banks a single engine for market risk, credit risk, and ALM that 'acquires data once and uses it many times' to help significantly enhance a bank's potential for growth. A truly enterprise-wide solution for measuring and managing market risks across all banking activities, the software's architecture can provide enterprise-level information to senior management, and cutting-edge tools and analytics to the front office. Through its single framework, Algorithmics' solution enables banks to strengthen their risk management system, pursue superior risk-adjusted returns, and instill the concept of risk into a firm's culture.



## Features & Benefits

### Enhance performance

Many sophisticated risk analytics are computationally intensive and require vast amounts of system resources. This barrier prevents many organizations from engaging in tight time windows, or re-calculations if input errors are found. Engineered to distribute complex calculations across multiple processors on a single machine and across multiple machines, Algorithmics' solution enables firms to realize faster, cost effective computations that support better business decisions.

### Multi-platform support

Algorithmics' advanced, high-performance architecture divides complex market and credit risk calculations across multiple processors, resulting in faster, more efficient computation. Designed to run on both Solaris and Linux platforms, the solution enables firms to utilize existing resources and migrate to a Linux environment in stages.

### Comprehensive instrument coverage

Algorithmics provides many different financial instruments that are being constantly updated and expanded. With an asset coverage library that includes over 20 geographical markets and over 400 financial products, the solution enables a firm to analyze the sources of risk in a portfolio, including breakdowns by risk factor, virtual group, and individual security.

### Advanced risk measurement and management

The solution supports an extensive range of simulation-based risk measures, such as VaR, EaR, PFEs, and scenario-based P&L estimates following specific curve shifts, index shocks, and stress tests. Users can also perform a variety of analytic functions, such as duration, spread duration, yield, and exposure calculations.

### Integrated ALM and market risk

Algorithmics' solution enables users to analyze both the short-term earnings view as well as the long-term economic view of risk. It presents extensive coverage of asset and liability product classes, pricing models, scenario tools, and risk analytics that provide a clear basis for rational, strategic decisions.

### Credit exposures

Algorithmics' solution contains the functionality to calculate and aggregate simulation-based exposures through multi-step Monte Carlo simulation and advanced scenario generation. The solution also supports the netting of exposures according to netting agreements and incorporates the effects of bilateral collateral calls on net credit exposures.

### Improve data integration

Integrating market risk, credit risk, and ALM measurement and analytics provides banks with a single, shared data architecture. By placing all of a firm's information into one scalable, transparent database, Algorithmics' solution requires that risk data is acquired only once, resulting in faster returns of more consistent results that require less time and lower maintenance costs to process.

### Save time and expense of reconciliation

Different systems value trades differently, which can result in a time consuming and costly undertaking when reconciling valuations, especially across multiple books. Leveraging its single architecture system, Algorithmics' solution uses the same approach and valuation models for market analytics, credit exposure, and ALM, saving on the time and expense of reconciliation.

### Reduce cost of ownership

Traditional risk analytics require users and IT to learn and support several systems. This approach leads to increases in operational costs, training costs, and the potential for manual error. With only one system to learn, reference, and support, Algorithmics' integrated approach to market risk, credit risk, and ALM reduces the complexity and maintenance costs normally associated with installed software systems.

## Professional Services

Supported by one of the largest research and development groups in the industry, Algorithmics' professional services team utilizes industry best practices and qualified personnel to ensure that implementations are delivered on time and on budget. Using a systematic milestone review system and proven implementation tools, Algorithmics' professional services team gives clients the opportunity to dramatically reduce the costs, project risk, and time associated with complex, enterprise-wide projects.

## Algo Academy

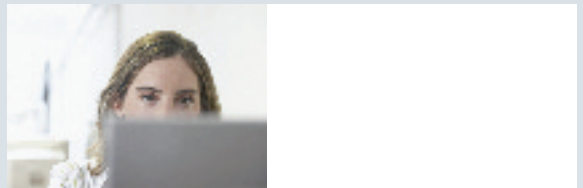
Algorithmics offers courses for each of its risk management solutions through training centers in Frankfurt, London, and Toronto. From introductory sessions to advanced workshops, Algo Academy courses provide product user training related to enterprise risk management. Whether you are looking to develop new skills, increase productivity, or enhance current expertise, the Algo Academy provides a valuable opportunity to turn risk management knowledge into a competitive advantage.

## Algo Assist

Combining state-of-the-art technology with expert product knowledge, the Algo Assist team provides Algorithmics clients with world-class technical support via telephone, email, and the Algo Assist website. AlgoAssist.com provides anytime, anywhere access to key features including a service request system, knowledge base searches, and a documentation library. Clients may choose to enhance coverage with Premium Support, which provides additional benefits including 24/7 access to live Algo Assist personnel.

## About Algorithmics

Algorithmics is the world's leading provider of enterprise risk solutions. Financial organizations from around the world use Algorithmics' software, analytics, and advisory services to help them make risk-aware business decisions, maximize shareholder value, and meet regulatory requirements. Supported by a global team of risk experts based in all major financial centers, Algorithmics offers proven, award-winning solutions for market, credit, and operational risk, as well as collateral and capital management. Algorithmics is a member of the Fitch Group.



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