IBM Algo Asset Liability Management

Industry-leading asset and liability management solution for the enterprise

With IBM® Algo ALM, asset and liability managers gain advanced balance sheet analytics, sophisticated scenarios, and risk-based decision support that help enable financial institutions to remain competitive, facilitate compliance with regulatory requirements, and increase shareholder value.

Highlights

The fast-paced world of global markets presents asset and liability professionals with new and evolving challenges. Competition has led to a broader range of investment products – and a corresponding increase in the volume and variety of risks an institution is exposed to. Uncertain investment yields, variable interest rates, and increased demands from regulators have expanded the need for asset and liability management (ALM) beyond its traditional focus on static portfolios.
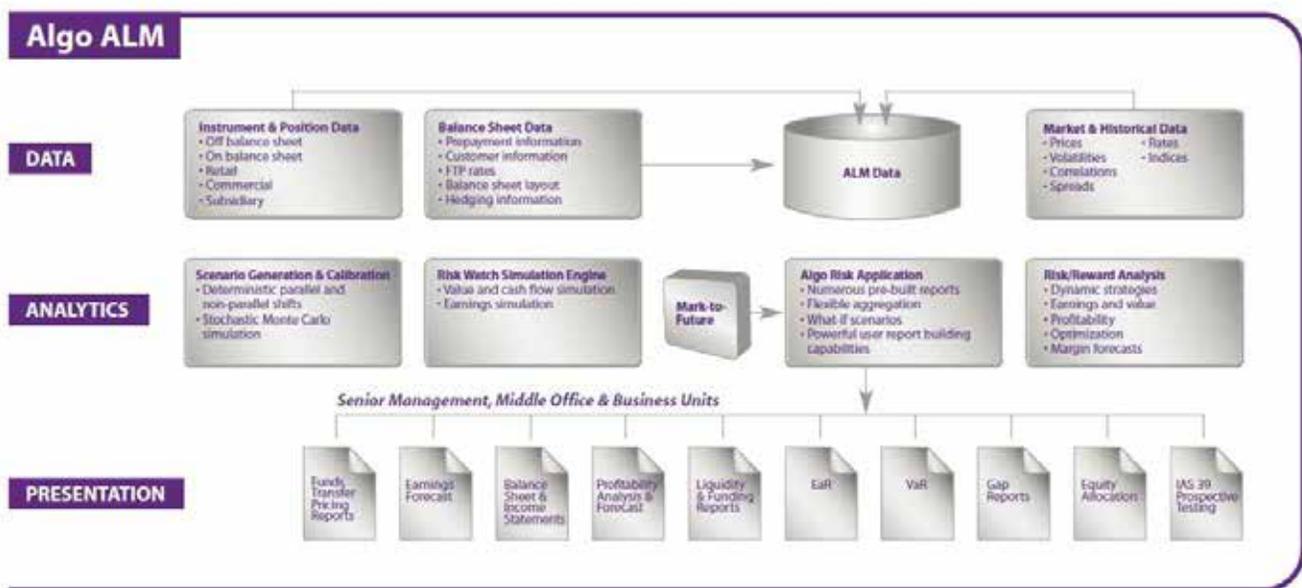
IBM Algo ALM

To keep pace with modern markets, financial institutions require accurate, detailed information and analytics on assets and liabilities. Up-to-the-minute strategies informed by variables such as interest rates, risk appetites, and customer demand help banks to identify profitable opportunities, support strategic goals, and minimize financial uncertainty.

IBM Algo ALM helps to meet these needs with a dynamic, forward-looking risk management solution. Through an advanced, scenario-based methodology, IBM Algo ALM provides an integrated view across multiple risk factors and asset classes, resulting in a consistent, insightful picture of the future that can be more easily shared across the enterprise. IBM Algo ALM helps enable asset and liability managers and treasurers to access detailed risk information, including what-if analysis and limit monitoring, as well as to assess, compare, and construct effective hedging strategies.

Complete with advanced reporting capabilities delivered through an accessible, web-browser interface, IBM Algo ALM helps to simplify the process of implementing strategies that support efforts to comply with regulatory and company policies, mitigate total balance sheet management risk, influence net earnings, and manage shareholder value creation.

Key benefits

Improves risk management

IBM Algo ALM provides advanced tools including deterministic and stochastic scenarios within static and dynamic strategies to help measure, monitor, and manage risks in association with returns and shareholder value analytics, utilizing more accurate data to mitigate risk.

Supports multiple perspectives on risk

The successful management of risk requires longer-term perspectives. IBM Algo ALM helps enable users to analyze both the short-term earnings view as well as the long-term economic view of risk. Combined with advanced analytics, this dual perspective is very helpful to asset and liability professionals.

Enhances strategic decision making

IBM Algo ALM provides extensive coverage of asset and liability product classes, pricing models, scenario tools, and risk analytics. Using a consistent framework, a firm is able to dynamically identify concentrations of risk categorized by risk factor and strategy, providing clearer support for educated, strategic decisions.

Adapts to internal policies

IBM Algo ALM helps enable the limits of liquidity and hedging policies regarding exposure to be followed, even within conditional dynamic strategies. This flexibility sets IBM Algo ALM apart from competing solutions that allow institutions to forecast future business – but will not take into account corporate limitations that restrict risk exposure.

Helps facilitate regulatory compliance

Combining extensive instrument coverage with advanced analytical methods and a flexible architecture, IBM Algo ALM offers balance sheet managers a complete framework for addressing current Basel II, Pillar II requirements.

Adapts to evolving business needs

Built on a highly scalable, flexible risk architecture, IBM Algo ALM's design helps enable firms to more quickly respond to additions and changes in asset and liability classes, business lines, investment strategies, and risk methodologies. A scalable client server and web-based reporting structure is tailored to meet the needs of different groups across an organization.

Key functionalities

IBM Algo ALM provides a highly flexible and risk-informed picture of potential exposures and opportunities. These key functionalities are based on IBM's award-winning Mark-to-Future technology, and are all part of the IBM Algo ALM enterprise-wide solution.

Interest rate risk

IBM Algo ALM delivers a wide assortment of interest rate risk measures, including traditional, advanced, and user-based. Measures include interest rate sensitivities gap analyses, and analytics determining net interest income, earnings-at-risk (EaR), economic value, and value-at-risk (VaR).

Management reporting and performance measures

Management reporting includes balance sheet ratio analysis, such as capital to assets, equity to assets, debt to assets, and debt to equity across both book and market values. Risk-adjusted performance measures, such as RaRoC, allow you to see which businesses are taking the most risks, and associate these risks with returns in order to help determine whether they exceed shareholders expectations.

Value-based analytics

IBM Algo ALM provides a variety of economic value-based analytics that assist in value creation from a shareholder perspective while supporting efforts to comply with risk and regulatory constraints. Based on full valuation with little or no constraining assumptions or required short cuts, these can be used across asset and liability classes, risk factors, scenarios, and risk analytics.

Liquidity and funding risks

Managing liquidity in banking organizations requires knowledge of when liquidity problems might arise and how the bank can react to such a situation. IBM Algo ALM allows the capture of these through its dynamic, scenario-dependent framework. As well as modeling normal and stressed cash flows, and incorporating business assumptions, the solution assists in the determination of the counterbalancing capacity based on limit curves.

Foreign exchange risk

Institutional assets and liabilities held in a foreign currency will be affected by changes in foreign exchange rates (earnings and value). IBM Algo ALM offers advanced currency scenario testing to assess what impact such changes may have on the P&L, VaR, and EaR.

Funds transfer pricing (FTP)

Knowing which products and profit centers are generating margins is at the heart of determining reliable and consistent business plans. IBM Algo ALM provides a flexible framework for such plans to help determine profitability and risk. Multiple FTP rate calculation measures include matched maturity, repricing, duration, discounted value, and weighted single average rate.

IAS 39 and FAS 133

To address the requirements of IAS 39 and FAS 133, IBM Algo ALM provides financial institutions and corporations with an enterprise risk platform that helps proactively assess and manage financially-risky positions (such as hedged items and associated hedging derivatives) that are entitled to be recorded at fair value under international hedge accounting rules.

Optionality

IBM Algo ALM caters to prepayment assumptions, which can be predetermined or dynamic dependent upon the scenario conditions. Indeterminate maturity products are modeled using industry best-practice methods, such as replicating portfolio procedures. Together these provide an analysis of optionality and its impact on earnings, value, and liquidity on the balance sheet.

Business risk

IBM Algo ALM has the capability for static and powerful conditional strategies. Conditional strategies help enable users to incorporate liquidity and hedging policies into their simulations, resulting in more complete and dynamic business risk modeling. Examples of conditional strategies include balance sheet leverage, hedging policies, and funding strategies related to the market conditions of each scenario.

Optimization

IBM Algo ALM's patented multi-period, non-parametric stochastic optimization tool can help balance sheet managers construct optimal hedges based on an objective function that incorporates economic, earnings, and risk perspectives.

Additional features

Simulation-based risk methodology

IBM Algo ALM separates the simulation engine from the ability to generate scenarios, providing asset and liability managers with the flexibility to define the measures that are appropriate to their particular needs. Simulation-based risk measures can span a wide range of analysis, including numerical sensitivities, user-defined stress tests, historical replays, and probabilistic risk measures.

Advanced scenario-generation capability

IBM Algo ALM uses risk factors to generate scenarios across different time steps, which are then used to simulate and stress test portfolios. The solution provides users with a dynamic environment to help create historical, subjective stress, and Monte Carlo scenarios.

Aggregation

IBM Algo ALM can process a virtually unlimited number of layers, and an unlimited number of accounts within each layer. Multiple charts of accounts may be simultaneously applied to the same transaction data, allowing for analyses on alternative fixed aggregations to be conducted.

Sophisticated reporting capabilities

Over 100 pre-defined reports exist within IBM Algo ALM's user-friendly, web-based reporting platform. Each of these reports includes multiple tables and charts, and allows users to choose from multiple types of aggregation. Users can also build their own user-defined reports more quickly and easily using IBM Algo ALM's report builder.

Complete multi-currency support

IBM Algo ALM is a genuine multi-currency solution that allows users to define multiple currency balance sheets. Risks are therefore measured, monitored, and managed on a currency basis, and where applicable, on a consolidated basis.

Extensive instrument coverage

IBM Algo ALM incorporates cash flow generation and valuation models for a wide variety of balance and off-balance sheet instruments, including complex option-based products. Valuation tools range from basic discounted cash flow and closed form models to sophisticated lattice and Monte Carlo functions. Coverage may be further extended through the integration of proprietary or third-party models.

Gap analysis report aggregated by balance sheet hierarchy for a 200Bps scenario

EaR report aggregated by credit rating with graphs of time buckets, scenarios, and distribution

EVoE report detailing value concentration by balance sheet group

About Business Analytics

IBM Business 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.

Business Analytics solutions enable companies to identify and visualize trends and patterns in areas, such as customer analytics, that 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 more information

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