

Factsheet – Fusion Invest

Fixed income

Fusion Invest provides a window on the market with real-time capabilities and risk mitigation, enabling investment managers to react quickly when economic forces impact real return

The impact of Brexit, coupled with the global pandemic, is causing inflation to rise.

Interest rates could be on the up to avoid the economy overheating. Investors are, therefore, keeping a watchful eye on fixed income assets. Should we enter a sustained inflationary period, we could see a paradigm shift from the last 25 years of benign price movement.

Throw into the mix the transition from LIBOR to risk free rates (RFR), and you have a seismic shift in the treasury and capital markets landscape. The impact will be vast, with the need to adapt pricing models, updating compliant workflows, and implementing operational changes across all lending segments.

Fusion Invest's flexible operating model supports the new rate conventions. Plus, it ensures better transparency and collaboration throughout the investment process delivering a consistent analytics framework on top of a real-time Investment Book of Record. Business functions, including the front office, risk department, and back office, are optimally aligned.

Key benefits

Fusion Invest provides full transparency and oversight that improves portfolio returns through enhanced decision making.

- Broad coverage of fixed income products and markets: from investment grade to high yield, developed to emerging markets with localization, and corporates to government bonds.
- Real-time capabilities providing accurate simulation, reporting and interaction with clients.
- Advanced scenarios with an extensive set of option-adjusted risk analytics and model-based calculation of risk analytics whilst respecting the marked to market price.
- Automated lifecycle management enhancing operational efficiency.

- Full integration with established data providers such as Bloomberg, Refinitiv and Markit.
- Faster time-to-market achieved with out-of-the-box connectivity to relevant third parties.
- Seamless order raising, from simulation to compliance checking whilst incorporating analytics into decision making.
- Continuous investment in product development to address constantly evolving market challenges.
- A wealth of experience from providing fixed income trading solutions for over 20 years.

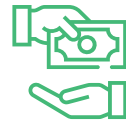
Product coverage

Covering a broad range of fixed income products, geographies, and markets, our solution delivers a comprehensive view of your portfolios and eliminates the challenges of onboarding new strategies or assets



Money market

- Cash deposits.
- Commercial papers.
- Debt.
- Bond repo.



Bonds

- Fixed-rate & floating-rate bonds.
- Fixed-to-float, step-up/step-down bonds.
- Cross-currency bonds.
- Callable bonds, callable sinkers.
- Convertible bonds and preferred shares.
- Bond benchmarks, liability cash flow containers.
- International coverage of government and corporate bonds.
- Structured notes:
 - Floating rate notes indexed to Libor, CMS, CMT, inverse floater with coupon rate type: range accrual, snowball, spread, digital.
 - Amortization, PIK, sinking.



Bond derivatives

- Bond forwards, bond options.
- Bond futures: Notional futures, bond futures options.
- Par/par and proceed asset swaps.
- Total return swaps (TRS) on bonds.



Inflation

- Inflation indices and inflation as virtual currencies.
- Inflation interpolation rules including “start of month”, linear interpolation and specific Brazilian, Argentinian, Japanese, and Australian rules, with seasonality adjustment.
- Inflation-linked bonds.
- ZC and YoY inflation swaps, inflation-indexed notional swaps.
- Inflation asset swaps.
- Inflation caps and floors.
- Structured inflation swaps such as LPI swaps.



Credit derivatives and structures

- Support of ISDA 2009, 2014, 2015.
- CDS - Single name and index.
- ABS and MBS including passthrough, interest-only, principal only.
- Credit-linked note with leverage and principal protection - quanto and compo.
- Synthetic CDO, CDO², Nth to default.

Pricing and risk models

Finastra's experienced quant team continuously support and invest in product development to address the constantly evolving market challenges for all types of assets, such as management of credit big bang and ISDA conventions, negative interest rate/OIS discounting, and most recently, the transition from LIBOR to new Alternative Reference Rates (ARR).

- MtM price valuation with coherent model-based risk analytics in accordance with the market price.
- Discounted cash flows.
- Valuation of callable bond "to 1st call/put" or "to maturity" with option-adjusted pricing or discounted cash flows.
- Hull & White - capture of the full-term structure of interest rate; quick calibration with relevant market swaption prices; integration in explicit PDE for an accurate valuation of path-dependent interest rate derivatives.

- Black (Bachelier) for option valuation.
- Libor Market Model (LMM) - direct capture of forward LIBOR dynamics; flexible calibration parameters allowing to find a balance between accuracy and performance; inclusion in Monte Carlo simulation for valuing and hedging exotic derivatives coherently with vanilla products.
- Convertible bond valuation:
 - Regime switching with default rate, jump rates and transition probabilities, taking into account the correlation between equity and credit risk.
 - Explicit PDE with credit risk model Tsiveriotis & Fernandez.
- BGJM (ISDA 2009) credit model.
- One-factor copula credit correlation model (Gaussian, Clayton).





Market data management

Fusion Invest's accelerated solution deployment has a set of pre-packaged interfaces for data providers

In addition, for any interface, standards can be adjusted to fit specific requirements based on configuration and customization, leveraging Fusion Invest's powerful Software Development Kit (SDK).

- Real-time interest rate curves (Refinitiv, Bloomberg).
- Real-time bond prices supplied by established data providers (Refinitiv, Bloomberg).
- Real-time, Sameday and EOD credit curves from Markit.
- Negative interest rate managed for curve calibration, interest rate fixing and product valuation, and zero or negative strike option. Option valuation with normal volatility or shifted-lognormal volatility.
- Multi-curve framework, including:
 - Bond curve with implied rate from bond prices.
 - Bond spread curve including parametric spread (Nelson Siegel).
 - OIS curve.
 - Interest rate swap curve (collateralized in domestic overnight index rate / in foreign currency).
 - Tenor basis swap curve.
 - Forex (cross-currency basis swap) curve.
- Management of bond spread curve per sector and rating over the government bond rate curve.
- Support of CSA discounting, including cross-currency, discounting.
- Automatic upload of bond definitions and fixed income benchmark (Bloomberg, Refinitiv, Markit, RIMES).
- Automatic upload of cap and floor, swaption volatilities - lognormal or normal volatilities (Bloomberg).
- Bond credit spread can be based on CDS rates, zero-coupon spread, asset swap spread, or YTM spread.
- Support of credit spread quote: par spread, fixed coupon upfront and conventional spread; conversion of conventional spread (quoted spread) to upfront and vice versa.
- Management of ZC or YoY (with convexity adjustment) Inflation curve, inflation volatility deduced from market inflation cap/floor prices.
- Inflation seasonality adjustments with historical seasonal factors estimated from an ARIMA(11) process.

Market risk

With the ability for all departments within an investment management company to work together seamlessly, risk management is transformed

Investment managers have consistent, comprehensive, real-time pricing and risk capabilities across all asset classes. Risk regulatory standards and internal requirements are met at every stage of the lifecycle from pre-trade to ex-post.

- Large range of risk indicators: interest rate risk, credit risk and inflation risk; including but not limited to: DV01, KRD, IR convexity, effective duration, Macaulay duration, YTM sensitivity, CS01, credit convexity, credit spread duration, option-adjusted spread, DTS, IE01, inflation convexity.
- Portfolio risk analysis with the breakdown of interest rate sensitivities by curve family and by maturity, as well as credit risk and inflation risk.
- Portfolio exposure view by issuer, credit rating, sector.
- Automatic hedge calculation with custom sets of IRS, futures and CDS.
- Stress tests with flexible curve transformations: shifts, rotations, curvature.
- Exposure to market volatilities for callable bonds, bond options and convertible bonds.
- Decomposition of bond and specific risk for repo contracts.
- Parametric, historical and Monte-Carlo Value at Risk (VaR) with money-market, future, swap, and bond risk factors.
- Measurement of tracking error against fixed income benchmarks.



Portfolio risk analysis overview

Front-to-back position keeping

Fusion Invest's dynamic reporting and monitoring capabilities align optimally for C-level, portfolio managers, risk managers, performance, and compliance officers, as well as middle office operations.

With access to decision support tools from their portfolio dashboards, portfolio managers can quickly simulate, test, and validate investment decisions. Integration to execution platforms and broker networks guarantee efficiency.

While comprehensive tracking of execution processes across all portfolios, and control with automated pre-trade checks, ensure transparency and compliance with regulatory and internal guidelines.

- Flexible portfolio dashboards with on-the-fly slicing & dicing.
- Integrated order simulation, order raising, compliance processes and reporting.
- Real-time pre/post-trade compliance checks with limits on exposures, any stress test and scenario, future cash, and securities balances.

- Comprehensive life cycle management from initiation to expiry, including coupon generation, call/put event, early redemption, and defaulted bond auctions.
- Front-to-back straight-through-processing with fully customizable workflows for listed, OTC and cleared products.
- Quick booking of trades via dedicated user-defined blotters .

About Finastra

Finastra is building an open platform that accelerates collaboration and innovation in financial services, creating better experiences for people, businesses and communities. Supported by the broadest and deepest portfolio of financial services software, Finastra delivers this vitally important technology to financial institutions of all sizes across the globe, including 90 of the world's top 100 banks. Our open architecture approach brings together a number of partners and innovators. Together we are leading the way in which applications are written, deployed and consumed in financial services to evolve with the changing needs of customers. Learn more at finastra.com

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