

Misys **Fusion**Risk Advanced Measures Software overview

Act with

greater insight

Move to **proactive** risk management

Connect **Innovate** Expand

"The Misys FusionRisk implementation for VaR has enabled us to develop advanced strategies for measuring risk and performing complex market risk computations, with a particular emphasis on meeting Basel II requirements. This has all been achieved within the constraints of our existing IT infrastructure."

Sami Ainous

Head of Treasury and Trading Technology, Noor Islamic Bank

Act with greater insight

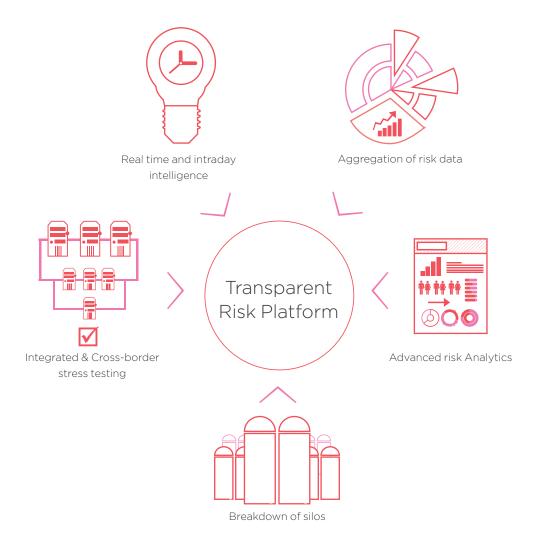
Current risk systems struggle to keep up with fast-paced changes in the market. Misys FusionRisk Advanced Measures provides the right risk information at the right time to support better decisions.

When markets become volatile, essential risk information becomes hard to get and banks cannot adjust their risk strategies with the necessary agility.

The risk management tools in Misys FusionRisk Advanced Measures help banks to act on risk in the business frontline.

They create better risk awareness across disparate business lines so that everyone can act quickly within an agreed risk appetite, and gain a competitive edge.

With Advanced Measures, banks are able to move their risk capabilities from defensive to proactive risk management, leading to faster and more profitable decisions.



The FusionRisk Advanced Measures advantage

suite of advanced trading risk components that equip financial institutions to make better-informed decisions. Proactive risk management Proven technology

"We also needed to validate, approve and reconcile both front-office and risk systems for pricing and risk metrics, and we wanted to make it quicker to capture Value at Risk (VaR) for newly launched products such as structured products and exotic derivatives with complex pay-off structures,"

Alvin Pereira

Deputy Head of Group Market Risk, Emirates NBD Group

By providing the right information at the right time, Misys FusionRisk Advanced Measures enables banks to make optimal choices on risk and capital requirements, while staying in line with the bank's risk appetite.

Misys FusionRisk Advanced Measures is a

Better control

Consolidated monitoring and automation of manual tasks eliminates reliance on spreadsheets and streamlines operations.

FusionRisk offers high performance risk analytics to cope with the flexibility required to "risk measure" all essential risk data in a bank. High parallelisation of data computation is now available at very low cost and provides multiple possibilities of intraday re-runs, including real-time pre-deal computations.

Improved compliance

Businesses can react quickly to changing requirements, reducing overall compliance costs and enabling "management by exception", which eliminates the time, effort and expense of manual checks.

Product capabilities

Market Risk. Advanced Measures aggregates enterprise-wide risk across all front office systems.

Its open architecture leverages existing pricing functions in the front office, eliminating pricing inconsistencies between the front and middle office and risk management systems. If desired, the connection to front office systems can also be accompanied by our high performance risk analytics platform from Misys.

Open architecture makes it easy to add new products and enables users to compute a consolidated view of market risk as well as manage limits globally. It ensures that as business grows, risk management capability will scale up proportionately with no duplication in development effort.

Reliable enterprise-wide market risk

Scenario Generation

- Market data repository
- Historical scenario generation based on stored historical data
- Monte Carlo-based scenario generation using advanced methods on an open architecture
- Scenario generation on stressed time period

Pricing Simulation

- Delegated pricing at front office level, orchestrated and controlled through FusionRisk's graphical interface
- FO indepent pricing engine with comprehensive product coverage and API for integration of client pricing libraries
- Pricing process, progress monitoring, and audit of all pricing inconsistencies or reported errors

Rate Management

- Fill gaps, identify outliers and define proxies and adjustment factors, e.g.for corporate actions with time-series management features
- Generate historical and stress test rate scenarios generated from historical data factorS



VaR

- VaR dashboard displays and aggregates the VaR (standard, marginal, incremental, component VaR or expected shortfall) per risk class on the fly
- Full transparency through drill down to underlying P&L and scenarios and deal level and graphical explanation of risk contributors
- Explanation of VaR changes between two dates in terms of trading and market data impact

Stress Tests

- Stress test dashboard displays and aggregates stress P&L per stress test class on chosen attribute
 (e.g. folder counterparty trader.)
- Fully flexible stress test shifts (parallel, twists, single tenors...) can be configured using
 FusionRisk GUI or imported from text files
- Automatic risk factor groups eliminate the operational burden of adding new risk factors to existing stress test calculations

Backtesting

- Observation and analysis of the number of exceptions in the backtest dashboard (incl. time line view)
- Calculation of hypothetical and actual Mark-To Madal D81
- Possibility to import Mark-to-Market P&L

Product capabilities

Advanced Counterparty Risk: Potential Future Exposure (PFE) & Credit Valuation Adjustments (CVA).

"The FusionRisk Advanced Measures PFE/CVA component typically reduces calculated exposure by 10% for standard counterparties and up to 40% for active counterparties."

FusionRisk Advanced Measures also calculates PFE and CVA. This additional component calculates the potential future exposure (PFE) to counterparties using an advanced Monte Carlo simulation engine and full instrument pricing.

The PFE capabilities are fully integrated with other FusionRisk components such as FusionRisk Credit. This is complemented by real-time PFE/EPE pre-deal checking that provides traders with incremental CVA and Debt Valuation Adjustment (DVA) implications. Traders can adjust prices accordingly or, for hedging transactions, select the most appropriate counterparty.

Exposures calculated by FusionRisk Advanced Measures can directly impact all limits defined in FusionRisk Credit. This means they can integrate straight into the firm's credit limit management framework for limits per time band and black hole limits.

Better exposure modelling

Because it takes credit mitigation effects into account, the FusionRisk Advanced Measures PFE/CVA component typically reduces calculated exposure by 10% for standard counterparties and up to 40% for active counterparties.

International Accounting Standards (IAS)

FusionRisk Advanced Measures also improves the credit quality adjustments required when determining the fair value of derivative instruments for IAS purposes. Its fast calculation allows daily and intraday recalculation of the credit quality adjustments, reducing unexpected reporting volatility.

Regulatory Capital

FusionRisk Advanced Measures is a building block for computing capital requirements with internal models. It solves the biggest challenge of calculating Expected Exposure (EE) and PFE profiles and enables calculation of exposure at default (EAD) in accordance with the Basel Internal Model Method (IMM) approach and the Basel CVA risk capital charge.

CVA Desk and CVA Charge

Advanced Measures can be used as a framework for calculating CVA for the bank's CVA desk and the front office. It provides the speed and transparency into calculation details necessary for managing CVA calculations.

Flexible limit impact calculation

FusionRisk Advanced Measures computes limit impacts based on full Monte Carlo PFE profiles. This method can be mixed and matched with classical exposure calculation methods on an instrument-by-instrument basis, flexibly aggregating bank-wide exposures.

Professional services and customer support

An industry proven **best practice** approach - that's the guiding principle of our professional services and support model. Misys clients benefit from our long track record of successful implementations.

"We received good technical support from Misys during the implementation and we are delighted that FusionRisk works exactly as expected."

Fuad Mohamed

Vice President Applications, Group IT, Emirates NBD Group

Professional services Best-practice delivery

The Misys delivery model is incorporated into our entire product lifecycle. We leverage best practice business processes in the design, development and quality assurance of all of our products. While we acknowledge that one size doesn't fit all in financial software, we know that a delivery approach that focuses on industry proven best practice process models helps our clients to save costs and benefit from the institutional knowledge Misys has developed across thousands of successful implementations. It means:

- Faster implementation: Repeatable delivery means projects are shorter and more predictable.
- Reduced TCO: Clear focus avoids unnecessary expenditure.
- Less risk: A standard, proven approach means many risks have already been mitigated.

Centre of excellence

Co-located with our development teams, the 200-strong Misys Service Delivery Centre ensures that we share best practice both internally and with partners. It enables us to refine implementations offsite before taking them back to the client.

Customer support

Misys clients benefit from the expert knowledge of 1000+ resources worldwide whose primary function is to provide professional, scalable software support and maintenance.

Deep domain expertise.

Our technical and application support people have strong industry and product knowledge with continuous technical and industry training programs to ensure that Misys support teams can meet your evolving business needs.

Scalable support model.

As a Misys client, you can choose from a standard, professionalised support model or a specialised, premium support package depending on your needs. Because Misys support has a broad, global footprint that operates in all time zones and regions, Misys teams can scale to your requirements.

Valuable advisory services.

Our Systems Advisory Group (SAG) provides system reviews to help clients understand how to use their Misys systems more effectively and derive maximum value from their applications.

SAG reviews have helped more than 80% of participating customers to identify ways to utilise their Misys software more effectively and use more system functionality.

Proven, award-winning solutions



FS Tech Awards 2013

Misys Global Risk wins the "Risk management software of the year" award in Aoril 2013



Risk Technology Rankings 2012

Misys wins overall category and 7 others in the 2012 Risk Technology Ranking**s**



Structured Products Technology Rankings 2012

Misys wins Risk Management - Collateral Management and 4 others in the Structured products 2012 Awards



Risk Technology Rankings 2013

Misys wins enterprise-wide risk management category and seven others in the 2013 Risk Technology Rankings



AsiaRisk Technology Rankings 2013

Misys wins overall category and 7 others in the Asia Risl Technology rankings 2013



AsiaRisk Technology Rankings 2012

Misys wins overall category and 7 others in the Asia Risk Technology rankings 2012

About Misys

Misys is at the forefront of the financial software industry, providing the broadest portfolio of banking, capital markets, investment management and risk solutions available on the market. With more than 2,000 customers in 130 countries our team of domain experts, combined with our partner eco-system, have an unparalleled ability to address industry requirements at both a global and local level. We connect systems, collect data and create intelligent information to drive smarter business decisions. To learn more about how our Fusion software portfolio can deliver a holistic view of your operations, and help you to solve your most complex challenges, please visit **misys.com** and follow us **@MisysFS** on Twitter.

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