

Eurex Clearing Prisma – Setting new standards in CCP risk management – overview and update

Eurex Clearing Prisma calculates combined risks across all markets for products that share similar risk characteristics within customer and proprietary positions according to liquidation groups resulting in more accurate risk calculations. This allows us to provide higher capital efficiencies and a stronger risk management framework to our customers. Our portfolio-based margining approach is replacing our existing margining methodology, Risk-based Margining (RBM). With this date approaching, we are providing you with an overview and update on what to expect from Eurex Clearing Prisma.

Our risk model

The Eurex Clearing Prisma method is based on the view of each member’s entire portfolio in one so called liquidation group and has the advantage to account for hedging and cross-correlation effects through determining the margin requirement on a portfolio level as opposed to a product-by-product view. The single elements in the concept are selected so that risk calculation is made adequately and stable, ensuring that the concept withstands new shocks and changes to the financial markets and flexibly adapts to changes in the risk environment.

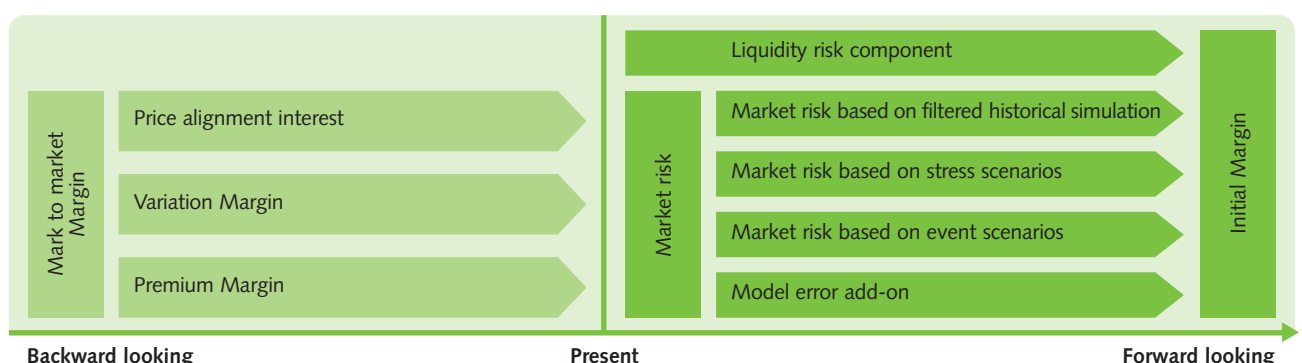
As depicted in the graph below, there will be two margin components:

- backward looking margin components (i.e. the mark to market margin) and
- improved forward looking margin components (i.e. the initial margin).

Key benefits

Our new portfolio-based risk management methodology will provide the following benefits:

- **Higher capital efficiencies:** More accurate risk netting effects for listed, and between listed and OTC positions.
- **Greater accuracy:** Cross-product scenarios enable a consistent way to account for portfolio correlation and diversification effects.
- **Robustness:** Methodology designed to enable stable margin requirements with highest adequacy.
- **Consistent framework:** Consistent risk and default management process for listed and OTC products.



Margin efficiencies with cross margining

Eurex Clearing Prisma permits cross margining between products as well as across liquidation groups cleared by Eurex Clearing. This is especially applied to the interest rate products where cross margining concerns the allocation of positions of listed fixed income products and OTC IRD products in the same liquidation group, considering the sensitivities of the products to the general level of interest rates. This ensures that the reduced risk profile of interest rate hedged portfolios is adequately reflected by lower initial margin requirements.

Comparison of Eurex Clearing Prisma and RBM

While risk factors are the key input in both RBM and Eurex Clearing Prisma, the main difference is in the offsetting structure. Whereas with RBM netting has been for same series, with the same underlying with different maturities, Eurex Clearing Prisma fully offsets risks between all products in one liquidation group.

The structural differences between the two models are sensitive to portfolio strategy, market regimes and flooring. Due to this it adequately covers the risk existing during the portfolio's margin period of risk/holding period. In general, Eurex Clearing Prisma better captures vega risk, rho risk and by employing risk adjustments addresses risk potentials not covered by RBM such as illiquidity and concentrations.

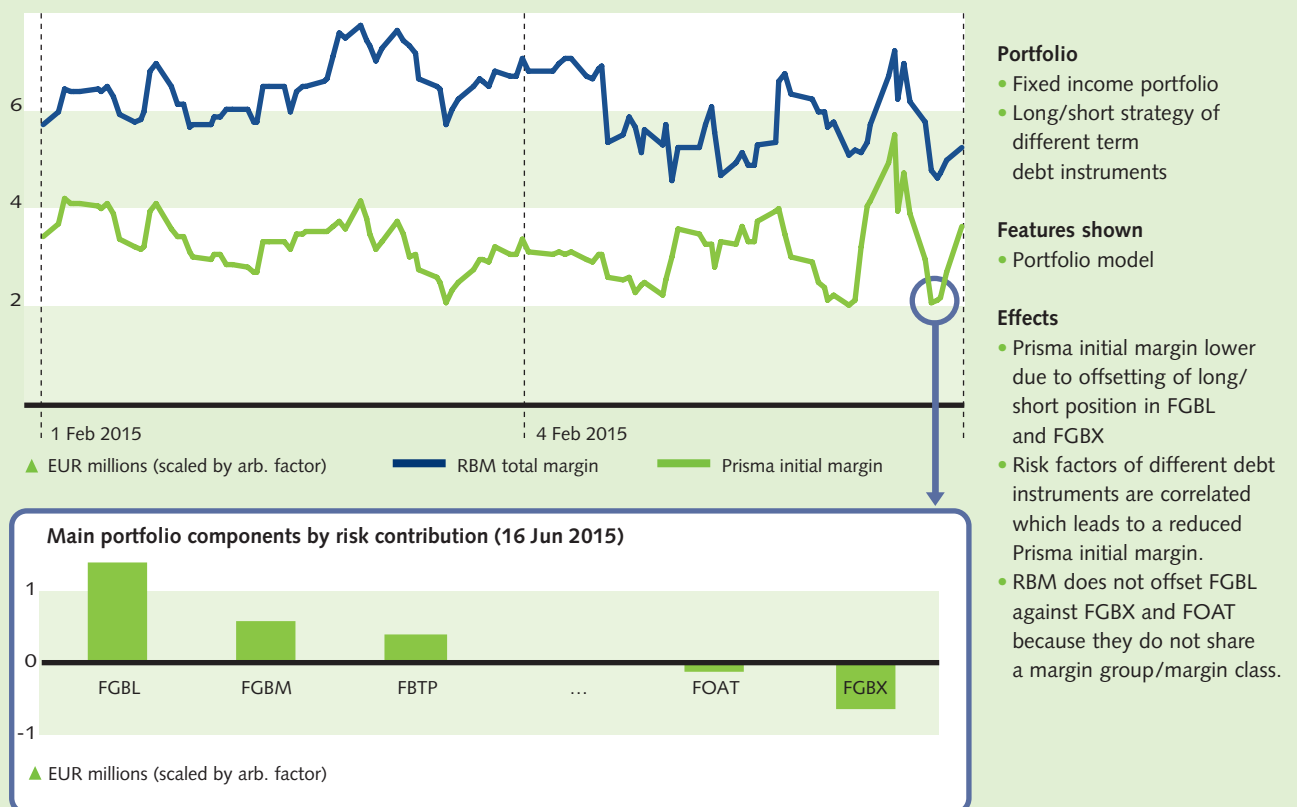
Overview RBM versus Eurex Clearing Prisma and their impact on initial margin

Prisma	RBM
Risk Horizon: N days (liquidation group dependant)	Risk Horizon: d Days
Portfolio Model (risk-factor view)	Scenario-matrix approach (product-by-product view)
Liquidation groups	Margin Groups/Classes
Liquidity Risk Adjustment (position size dependent)	Liquidity Factor (independent of position size)
Volatility Hardfloor	Volatility Hardfloor
Stress Period Floor	-
Reactiveness (reacts strongly to market change)	Reactiveness (reacts to market change)
Historical Volatility Model (EWMA)	Historical Volatility Model (EWMA)
Includes FX risk	-*
Includes interest rate risk	-

* Only included via FX haircuts on cloateral level

Eurex Clearing Members with well hedged portfolios, in particular long-short index-single-name strategies, will benefit from Eurex Clearing Prisma. Specifically for larger portfolios, the comparison between RBM and Eurex Clearing Prisma shows to be strongly portfolio dependent. While the portfolio diversification is captured by both models, RBM is restricted to a set of certain strategies and is therefore less efficient.

Example: Productive portfolio leading to reduced margin with Eurex Clearing Prisma compared to RBM



Decommissioning RBM

Eurex Clearing Prisma was launched in May 2013 and has been running in parallel with current Risk-based Margining method, allowing our members to migrate to the new risk method at their own pace.

Since Decemebr 2017, RBM is decommissioned for exchange-traded derivatives (ETDs) assigned to liquidation groups, meaning that all Clearing Members will be obliged to use Eurex Clearing Prisma as their margin methodology. From this point on, we will also stop providing data records in the Theoretical Price files for all ETDs assigned to a liquidation group in Eurex Clearing Prisma, both on the Common Report Engine (CRE) and on the Eurex

Clearing website. All data needed for reconciliation or replication of margin requirements calculated under the Eurex Clearing Prisma methodology are available to all members via the Transparency Enabler Files.

Eurex Clearing Prisma MarginCalculator

To support our clients with how to deal and work with the Eurex Clearing Prisma MarginCalculator we are providing a useful screencast which also shows how to execute calculations in the most efficient way.

By continuously providing smart solutions for your risk management, we are keeping you **clear to trade**.

For questions please contact

Philip Simons

Global Head of Fixed Income Sales & Business Development

T +44-20-78 62-72 39

philip.simons@deutsche-boerse.com

Markus-Alexander Flesch

Global Head Equity & Index Sales

T +41-43-430-71 21

markus-alexander.flesch@eurexchange.com

Jens Quiram

Global Head of FX Sales and OTC Product Development

T +49-69-211-1 26 19

Jens.Quiram@eurexexchange.com

Stefan Krause

Eurex Clearing Prisma Market & Vendor Readiness


T +49-69-211-196 10

stefan.krause@eurexclearing.com

Visit us at www.eurexclearing.com and www.eurexrepo.com
or follow us on **Twitter @eurexgroup**

ARBN Number: Eurex Frankfurt AG ARBN 100 999 764

This publication is provided solely for information purposes and does not purport to be complete. No representation or warranty is given with respect to the accuracy or completeness of the information herein. Additional information is available from Eurex Clearing AG upon request. Only Eurex Clearing AG's Clearing Conditions and further legal documents should be the basis for your legal and commercial assessment of Eurex Clearing AG's clearing models and further structures. The content of this publication is restricted to a descriptive summary. It does not provide (and does not purport to provide) any analysis of, or legal advice regarding, any legal, accounting or other effects of the Clearing Conditions or Eurex Clearing AG's clearing models or clearing structures. This publication has been prepared with respect to Eurex Clearing AG's structures and legal documents as of the date mentioned above.



Unlock the full benefits of central clearing – Connect directly to a CCP.

Things are changing. And it is Eurex Clearing that is helping you to harness changes by designing integrated solutions to unlock capital and gain operational efficiencies.

ISA Direct – our direct access model for the buy side. Combining elements of direct clearing membership and traditional relationship of client clearing.

With innovative solutions like ISA Direct, we keep you clear to trade.

www.eurexclearing.com