clear to trade

eurex clearing *circular 060/11*

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Recipients: All Clearing Members of Eurex Clearing AG and Vendors
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Introduction of a new Portfolio Based Risk Management Method: Project PRISMA

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Content may be most important for:

- Middle + Backoffice
- IT/System Administration
- Auditing/Security Coordination

Attachments:
none

Summary:

Being an industry leader in CCP risk management, Eurex Clearing intends to set new industry standards by introducing a new "Portfolio Based Risk Management" method for all cleared listed and OTC products. With this circular, Eurex Clearing provides an introduction to the new method and announces the high-level implementation plan and communication calendar. Project PRISMA is part of Eurex Clearing's strategic roadmap to prepare for upcoming regulatory changes and to improve market safety and integrity. Further major projects include Client Asset Protection services and new EurexOTC services for Interest Rate Swaps and Equity OTC products.

The new method will offer the following benefits for our clients and for the clearinghouse:

- **Higher Capital Efficiency:** More efficient risk aggregation across listed and OTC products
- **More Accuracy:** Multi risk-factor approach allows more precise risk calculations
- **Robustness:** Method designed to enable stable margin requirements
- **Consistent Framework:** Consistent risk and liquidation framework for listed and OTC products
- **More Flexibility:** Broader range of instruments covered with quicker to time-to-market

The "Portfolio Based Risk Management" will replace the existing Risk Based Margining (RBM) method. However, to facilitate a smooth transition for Clearing Members and their clients during the migration period, both methods (RBM and "Portfolio Based Risk Management") will run in parallel. Clearing Members and their clients can choose which method will apply per product and per position account.

Introduction of a new Portfolio Based Risk Management Method: Project PRISMA

Being an industry leader in CCP risk management, Eurex Clearing intends to set new industry standards by introducing a new "Portfolio Based Risk Management" method for all cleared listed and OTC products. With this circular, Eurex Clearing provides an introduction to the new method and announces the high-level implementation plan and communication calendar. Project PRISMA is part of Eurex Clearing's strategic roadmap to prepare for upcoming regulatory changes and to improve market safety and integrity. Further major projects include Client Asset Protection services and new EurexOTC trade entry services for Interest Rate Swaps and Equity OTC products.

Members of Eurex Clearing and their clients can migrate from the existing Risk Based Margining (RBM) model to the new method in a step-by-step approach. For this purpose, Eurex Clearing, in close cooperation with the Members, will release product groups consisting of products that share similar risk factors and functional requirements.

During the migration period, both methods (RBM and "Portfolio Based Risk Management") will run in parallel. Clearing Members and their clients can choose which method should be applied per product and per position account.

1. High Level Concept

Method

The new method is based on the view of each Member's entire portfolio 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.

Project PRISMA will also introduce a consistent risk method which will apply to all cleared markets covering listed and OTC products. Hence, "Portfolio Based Risk Management" will allow combining Eurex OTC products with the Eurex Exchanges' listed products and all other markets cleared by Eurex Clearing with efficient margin aggregation with offsets for hedged positions.

Portfolio margining can only be applied for positions which can be handled jointly in case of a Clearing Member default. Therefore each product will be assigned to a so-called liquidation group. Liquidation groups can consist of products across different asset classes, allowing offsets to be calculated within the group. Offsets across different liquidation groups will not be granted.

Liquidation groups comprise instruments which share similar risk factors. This allows that a liquidation group can be hedged, priced and auctioned within a reasonable period of time.

Margining

In general, there will be two margin components:

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

Mark-to-market margin

Mark-to-market margin quantifies the daily mark-to-market fluctuations. Evaluation of the mark-to-market margin is made by taking the difference between the actual and previous price of the current portfolios. For

example, given that the value of a portfolio is EUR 300 million today, whereas yesterday it was EUR 310 million, mark-to-market margin will equal EUR 10 million. The mark-to-market margin approach within the new method will stay unchanged compared to the currently existing RBM.

Initial margin

The initial margin requirement is the forward looking component and the main element of the new method. It will change compared to RBM (i.e. additional margin and futures spread margin).

The initial margin requirement is calculated for a portfolio of products that belong to a specific liquidation group. In the portfolio context, the margin calculation includes netting and aggregation of products within a liquidation group. The margins are not netted or aggregated across products from different liquidation groups.

The core margin calculation consists of the following components:

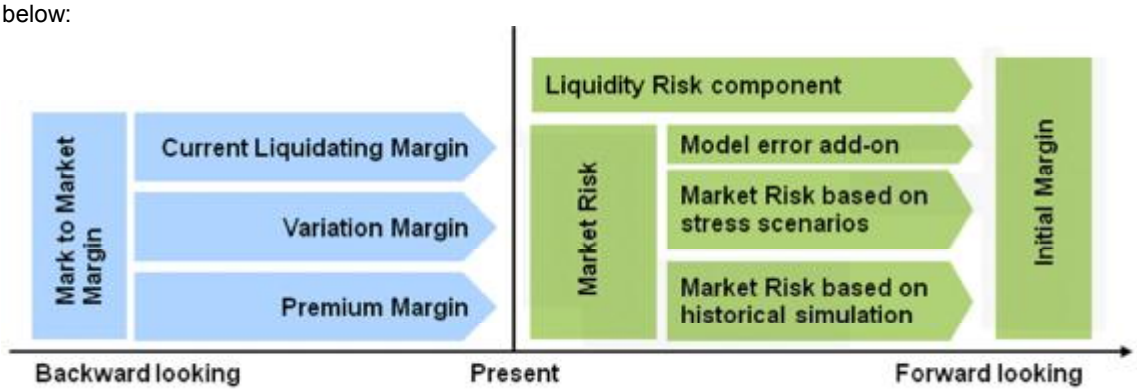
- Market risk component, based on two groups of scenarios:

  I. historical scenarios of the risk factors to account for market movement;
  II. stress scenarios of the risk factors to account for extreme market movements.

  The market risk is calculated as a tail analysis of the scenarios.

- Model error add-on to account for simplifications of the scenario calculation especially changes in the correlation (correlation break add-on) and changes in the volatility level (quantile correction add-on).
- Liquidity risk to account for losses due to trading impact of selling or buying large concentrated positions of a liquidation group.

These components associated to the future calculation of initial margin requirements are depicted in the figure below:



Default Management Process

Introduction of the new “Portfolio Based Risk Management” includes an improved and transparent default management process, ensuring that Eurex Clearing, its Members and clients are prepared in the best possible way to handle any defaults. The margin calculation method has been mapped to the default management procedure to ensure that the margin charged matches the default management process and its associated time horizon, e.g. the n-day holding period of the margining system is calibrated to match the asset class- or product-specific default management horizons. The default management framework promotes best practices and has been developed through extensive consultation with the market. The basic concept includes hedging of portfolios with the advice of Eurex Clearing’s Default Management Committee, and subsequently auctioning them off to participants. Eurex Clearing is currently in consultation with all stakeholders for preparation of publishing detailed legal and functional documentation.

2. Benefits using the new Method

The new "Portfolio Based Risk Management" method offers the following five benefits for clients and for the clearinghouse:

- **Higher Capital Efficiency** for clients through risk calculation on a portfolio basis. In addition, more accurate netting effects for listed, and between listed and OTC positions.
- **More Accuracy:** Cross-product scenarios enable a consistent way to account for portfolio correlation and diversification effects.
- **Robustness:** Stable margin requirements are enabled by the usage of add-ons for concentration, uncertainty in correlations and changes in the volatility level.
- **Consistent Framework:** Consistent risk and liquidation framework for listed and OTC products. Positions deemed suitable for simultaneous liquidation are logically assigned to the same liquidation group, whereby risk offsets are only granted within the same liquidation group.
- **More Flexibility** through reduced time-to-market for new products.

3. Roll-out and Migration Approach

Eurex Clearing understands the impact of the introduction of this new concept for the market participants and has therefore decided to introduce the new margin method over three steps, each of which will encompass different product groups and asset classes. During the step-by-step introduction, the new method and the RBM method will be offered in parallel for a defined period of time, allowing Members a smooth migration to the new risk method at their own pace. Decommissioning of the RBM method is scheduled for Q3 2013.

The initial software release is scheduled to go live in June 2012. The product set that will be migrated first will be the equity and equity index derivatives traded on the Eurex Exchanges and available as well for Eurex OTC services. The new risk system will offer margin offsets on a portfolio basis. Members wanting to benefit from these offsets will be able to migrate their portfolio per product and account to the new margin concept.

Increased Capital Efficiencies from the Extension of Eurex OTC Clear Product Range

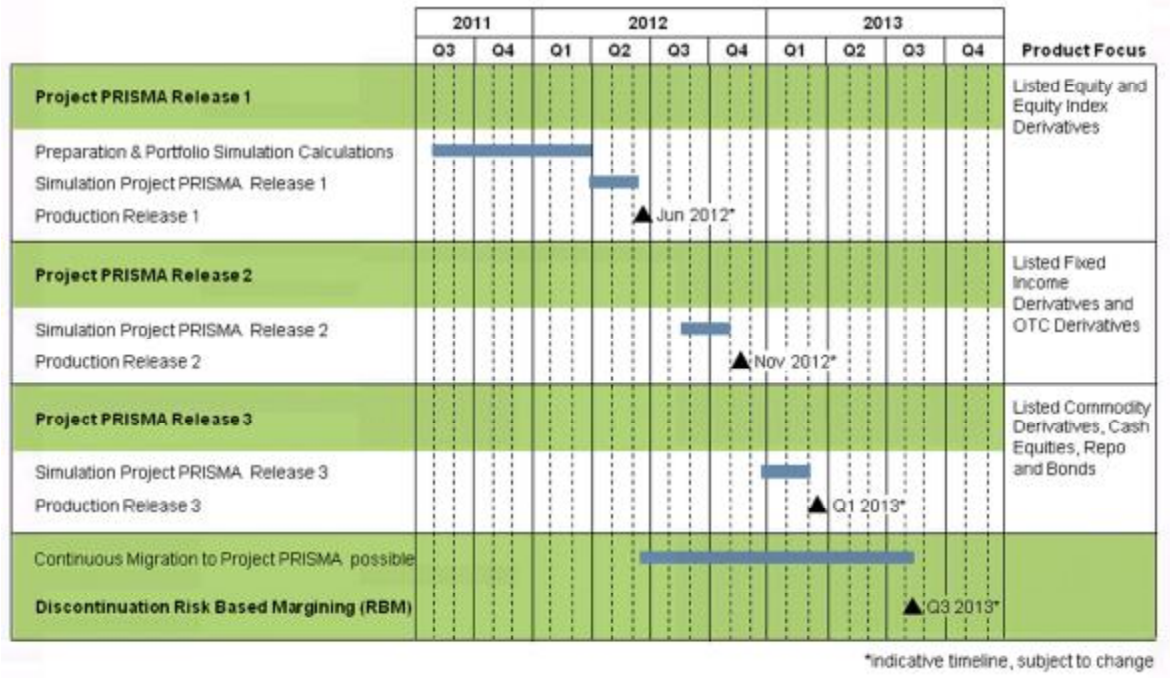
Although the new method will improve capital efficiency considerably even with Release 1, Members can expect further benefits from Release 2 scheduled for November 2012: With this second release, Eurex Clearing is planning to expand its EurexOTC service offering to cover plain vanilla interest rate swap products in four major currencies (EUR, USD, GBP and CHF) and OTC-traded options on European equity index and single equity underlyings. Starting November 2012, portfolio margining between the newly introduced OTC products and the listed products traded on the Eurex Exchanges will be possible.

Completing the Migration

Release 3 will contain all remaining products which Eurex Clearing is able to clear and is currently scheduled for Q1 2013.

After all products have been successfully migrated to the new margin method, RBM will continue to run in parallel until it will be decommissioned in Q3 2013. During the entire migration period, Members can individually decide when to migrate their portfolio on a product and account basis to the new method. In addition, Clearing Members will be able to re-calculate the margin requirements towards their clients still using RBM during the entire migration period. Eurex Clearing will continue to provide all necessary data in order to do so.

The following figure shows the schedule for the releases:



Supporting your Decision-Making Process

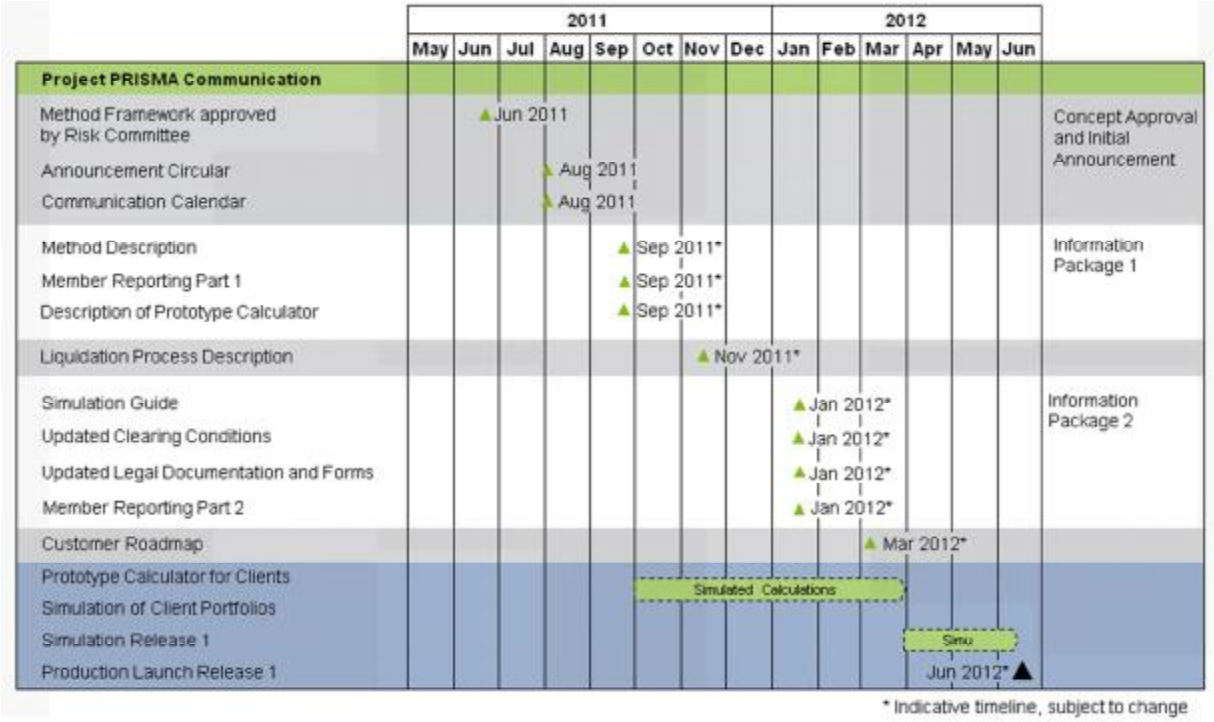
In order to assist Members in their decision-making process when to migrate to the new "Portfolio Based Risk Management", Eurex Clearing supports Members with multiple sample portfolios in order to assess the behaviour and effects of the new method.

In addition, Eurex Clearing will offer to simulate individual client portfolios with the new method using its prototype environment (as of Q3 2011). The results from this calculation can be compared to the result calculated according to RBM, giving an indication of the effects of the new margin method.

Further details on the re-calculation process and the relevant formats in which the portfolio needs to be provided can be found in the "Margin Calculation for Test Portfolio Guideline". Please get in touch with your Key Account Manager who will provide you with further information on the migration process.

Further Communication and Information

Further details on Project PRISMA and its implementation in the technical and legal environment of Eurex Clearing will be provided over the next months. Below figure shows the time schedule:



For those Members migrating in one of the later phases of the migration period a client roadmap document will be provided, describing the necessary steps to be taken to successfully migrate to the new “Portfolio Based Risk Management”.

Simulation and Rollout of Release 1

The start of the “Portfolio Based Risk Management” simulation for Release 1 is scheduled for Q2 2012 and will continue to be offered in the Permanent Simulation environment until the final decommissioning of RBM in Q3 2013. Production start for Release 1 is planned for June 2012.

Further information will be provided during upcoming individual client visits as well as in several workshops. The exact release date will be also announced in due course.

For any questions you may have about Project PRISMA, please contact Stefan Krause, Vendor Relations & Markets Readiness, e-mail: stefan.krause@eurexchange.com, tel. +49-69-211-1 96 10 or Jennifer Vuong, Clearing Sales, e-mail: jennifer.vuong@eurexchange.com, tel. +44-207-862-7239.

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