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Recipients: All Clearing Members, Non-Clearing Members and Registered Customers of Eurex Clearing AG and Vendors

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Availability of Eurex Clearing Prisma Margin Estimator (Eurex Clearing PME)

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Content may be most important for:	Attachments:
➲ All departments	none

Summary:

Eurex Clearing would like to inform Clearing Members, Non-Clearing Members, and Registered Customers about the new Eurex Clearing Prisma Margin Estimator (Eurex Clearing PME) designed in collaboration with the financial technology company OpenGamma.

The release of Eurex Clearing PME will help market participants and their clients to assess Eurex Clearing Prisma initial margins for their current as well as for any hypothetical portfolios. Eurex Clearing PME will be an additional offering to the existing Margin Calculator which is available in parallel. Eurex Clearing PME is designed as an on-premise solution, offering full API integration capabilities and very quick calculation.

Release of Eurex Clearing PME is scheduled for **16 November 2015**.

Eurex Clearing PME is designed to support our Clearing Members and clients specifically in the following situations:

- Assess margin requirements for listed Exchange Traded Derivatives (ETDs), OTC or cross-margined portfolios based on the Prisma margin methodology.
- Assess margin requirements for additional trades as part of a pre-trade analytics exercise.
- Clearing Members wanting to offer Prisma margin transparency to clients via their own internal client portals.

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The difference between Eurex Clearing PME and the Prisma Margin Calculator can be outlined as follows:

- Eurex Clearing PME is an on-premise solution where as the current Prisma Margin Calculator is running on the Eurex Clearing production and simulation environments.
- Eurex Clearing PME can be flexibly integrated on-premise via an API without the burden to connect to the Eurex Clearing IT infrastructure
- Using Eurex Clearing PME no portfolio information of current or to-be-executed trades has to leave the Clearing Member's and client's own infrastructure.
- The current Prisma Margin Calculator offers an interactive user interface while Eurex Clearing PME is designed for automated API use cases and on-premise multi-request analysis.

Eurex Clearing PME can be fully integrated into a Clearing Member's and client's IT infrastructure for fast on-site margin analysis. It is written in Java and allows the user to perform and access results for initial margin calculations via an application programming interface (API). The product scope comprises Prisma-eligible exchange traded derivatives (ETD) and over the counter (OTC) derivatives. Moreover, the capability to perform cross-margining calculations between ETD and OTC rates products has been included. Calculation results are transferred via the API which include, but are not limited to, risk scenario PnL vectors, NPVs at trade level for OTC derivatives and premium style ETDs, trade sensitivities, and all Prisma margin components and sub-components.

Eurex Clearing is dedicated to transparency especially through supporting its Clearing Members and customers in replicating margin requirements. Therefore Eurex Clearing PME is designed to support Clearing Members specifically in the following situations:

- Assess margin requirements for ETD, OTC, or cross-margined portfolios based on the Prisma margin methodology (documentation and examples are included in the software package delivered from Eurex Clearing).
- Assess margin requirements for additional trades as part of a pre-trade analytics exercise.
- Identify potential trades that lead to significant margin changes.
- Clearing Members wanting to offer Prisma margin transparency to clients via their own internal client portals.

As a software library is not a stand-alone application, additional steps are required to make use of the software. These include IT integration into the on-premise hardware and software infrastructure using the provided documentation of integration steps and examples. Calculation requests and responses need to be directed and received from the clients own front ends to the library via the provided API. Various market standard as well as custom input trade formats are supported as detailed below. The library makes use of market data information from Eurex Clearing Prisma Transparency Enabler (TE) files and OTCClear report files which need to be directed to the library by the user.

The OTCClear report files needed to operate the Eurex Clearing PME are the Interest Rate Curves Report (CC210), Risk Factor Report (CC202), Liquidity Tables Report (CC220), Initial Margin Configuration Set (CC221).

1. Getting access to the Eurex Clearing PME and files

1. On the Eurex Clearing website www.eurexclearing.com go to the margin calculator section under the link:

Risk management > MarginCalculators > Prisma

Eurex Clearing PME will be available as of 16 November 2015.

2. Download the form ("Application Form") for the new Eurex Clearing PME from the website, fill it in, sign it and return it to prisma-calculator@eurexclearing.com.
3. Initially Eurex Clearing will provide you with the library via mail on a USB stick. At a later stage the library will be available via the Eurex Clearing Member Section for download.
4. Integrate the Eurex Clearing PME library according to the provided documentation.
5. Retrieve Prisma Transparency Enabler (TE) files and OTCClear report files via the Common Report Engine (CRE) or the Eurex Clearing file services via the Eurex Clearing website under the link:

Risk management > Risk parameters > File services

Please see the documentation for required files and file names.
Please note that the Eurex Clearing file services are subject to fees.

2. Contents of the provided Eurex Clearing PME package

The ZIP file package consists of the following items:

1. A single Java archive containing the library (JAR file).
2. Documentation for the library API ("Javadocs" in a single ZIP archive).
3. Documentation for the OpenGamma Margining and OpenGamma Eurex Clearing Module (as HTML files).
4. Example source code showing the use of the library.
5. Examples for rate index fixings and holiday calendar as CSV files
6. Examples of ETD Transparency Enabler (TE) files and OTCClear report files.

3. Licences and maintenance

Two different types of licences can be provided free of charge to Clearing Members, Non-Clearing Members, and Registered Customers:

1. An **evaluation licence** which requires users to sign the respective terms and conditions. Under this licence no productive usage, e.g. using the library for making trade decisions or exposing it to own clients, is permitted. This will be the default licence to be provided by Eurex Clearing. It serves to assess potential integration efforts, and facilitates testing of results, usability and performance.
2. A **productive licence** which requires the user to sign the respective terms and conditions of the licence plus the maintenance agreement. Under this licence, unrestricted usage on company group level including the right to expose results to own clients is covered. Maintenance provides support hotlines and SLAs under which issues and defects with the library will be dealt with.

The software packages delivered under the evaluation and production licenses are identical. By default every new licensee will be asked to file for an **evaluation licence** before a **productive licence** can be obtained.

4. Supported products

OTC Derivatives	Exchange Traded Derivatives
• Interest Rate Swaps • Tenor Basis Swaps • Overnight Indexed Swaps • USD, EUR, GBP, JPY, CHF • All eligible indices and tenors • Stubs, Compounding, Variable Notionals • Zero Coupon Inflation Swaps	• All Prisma-eligible exchange traded derivatives, see reference in document Liquidation Groups on the Eurex Clearing website www.eurexclearing.com under: **Risk management > Risk parameters**

Library updates are provided free of charge if necessary, e.g. if new products are introduced to Prisma or methodology changes become effective.

5. Technical requirements

The library requires Java 7 (or later version) and one of the following operating systems:

- Apple Mac OS X (Yosemite or later version)
- Microsoft Windows (7 or later version)
- Microsoft Server (2008 R2 or later version)
- Linux (Fedora 21 or later; CentOS 6 or later version).

6. Supported inputs and outputs

To perform a margin calculation with the Eurex Clearing PME, the user needs to specify the portfolio, the path to the Eurex Clearing Transparency Enabler (TE) files and OTCClear report files as well as interest rate fixings and calendars via the API to the library.

User Defined Input	Content	Format
Trades	Trades	Eurex Clearing CSV, OpenGamma XML, FIXML, FPML, on-the-fly trade creation via API
	Sensitivities	CSV, OpenGamma XML
Holiday Calendars	Target, London, NY, etc.	OpenGamma CSV
Interest Rate Fixings	Euribor, Libor, etc.	OpenGamma CSV

The API returns the following results as Java objects which can be converted to OpenGamma XML or CSV (examples included in the delivered software package):

API Output	Data
Trade/Position-level measures	Base NPV, Scenario NPVs, DV01s
Portfolio-level measures	DV01, NPV, PnL Time Series, and all initial margin components

7. Accuracy and restrictions

Eurex Clearing PME is an estimation facility replicating the Prisma methodology. In general, the library-calculated initial margins especially for ETDs should be very accurate or even exact. Due to approximations for OTC transactions there is a deviation of up to ~5 percent possible.

Moreover, Eurex Clearing PME is not a validation solution for checking OTC trade eligibility for clearing. Clearing eligibility checks are only provided by the Eurex Clearing production system.

8. Introduction date

Release of Eurex Clearing PME is scheduled for 16 November 2015.

If you have any questions or require further information, please contact Trading & Clearing Services at tel. +49-69-211-1 17 00 or e-mail: prisma-calculator@eurexclearing.com.

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