

Eurex Clearing

Default Management Process



Eurex Clearing's Default Waterfall

Minimize the effect on the Default Waterfall and to stabilize the markets

- Eurex Clearing provides a multi-level security system
 - First the collateral and the Default Fund contribution of the member in default are utilized.
 - After the defaulter's contributions are exhausted, an assigned dedicated amount of Eurex Clearing, a so-called "Skin in the Game", is applied, before non-defaulting clearing members' Default Fund contributions, a "Second Skin in the Game" and remaining capital of Eurex Clearing are used.
 - Each clearing member's contribution to the Default Fund is based on a minimum contribution and a dynamic component, accounting for the individual clearing member's risk situation.
- There is one segmented Default Fund for all types of products cleared by Eurex Clearing.
- Following a realization of any Default Fund contributions of non-defaulted clearing members, such clearing members are asked to provide assessments to their contributions. Eurex Clearing simultaneously provides the further dedicated amount.
- Clearing members' total liability is limited as they have to provide a maximum of two assessments per capped period.

Eurex Clearing's Default Waterfall

Position Netting and Closing

Collateral of Clearing Member in Default

Default Fund Contribution of Clearing Member in Default

Skin in the Game of Eurex Clearing

Default Fund Contribution of Other Clearing Members & Second Skin in the Game of Eurex Clearing

Max 2 Assessments per Clearing Member and further dedicated amount

Remaining funds of Eurex Clearing

Segmentation of Default Waterfall



- Each layer of the Default Waterfall is segmented along the liquidation group structure. The size of a Default Fund Segment (DFS) is based on the Initial Margin of the Clearing Member in the respective liquidation group.
- Only the respective DFS can be used to cover losses in case of a default, unless there is a known surplus from other liquidation groups.
- The defaulter's contributions will be exhausted prior to any contributions from others.

For updated estimates of the total resources please refer to:

Default Waterfall (eurex.com)

Overview of Default Management Process

Default Management Process reflects best practice and complies with market requirements and regulatory guidelines

Governance

Portfolio Analysis & Hedging

Liquidation

Post Liquidation

Holding period serves as basis for risk calculation within Eurex Clearing

- Trigger analysis and convention of Emergency Committee
- Board decision on member suspension/ termination
- Convention of Default Management Committees to support Eurex Clearing
- Porting of Client positions and collateral wherever possible

- Portfolio analysis per liquidation group
- Handling of short expiry positions
- Execution of macro hedge strategy
- DMC-supported hedging execution as early as possible to limit potential losses bilateral or via Hedging Auctions

Independent Trade

- Voluntary auction, bilateral- or onexchange trade(s) to liquidate the hedged portfolio
- For bonds, amongst others, Independent Trades are the primary liquidation approach
- Mutual Default Fund will generally not be utilized in case of an Independent Trade. If usage of default fund is likely, Mandatory Auctions are preferred.

Mandatory Auction

- Participation in auctions is mandatory for members capable from an operational and risk perspective to absorb the respective portfolio
- Clients are allowed to bid via their clearing member
- Default Fund
 juniorization and
 penalty fee set
 incentives for
 competitive bidding

- Calculate Difference Claim per Standard Agreement closed-out
- Realization of CCP's default waterfall if defaulter's assets cannot fully cover the Difference Claim result including Default Fund juniorization (if applicable)
- Penalty fee for eligible Clearing Members (if applicable)

Each Default Management Committee supports the Default Management Process

Default Management Committees (DMCs)

Role of the DMC

- Each DMC is continuously defined, but only temporarily convened in case of a clearing member default or for regular default simulation exercises.
- One DMC for each liquidation group shall advise, assist, and provide recommendations to Eurex Clearing in defining hedging strategies and organizing auctions.

Nomination of DMC Members

- Clearing members can volunteer to participate in any DMC. In case of insufficient number of volunteers, Eurex Clearing nominates additional clearing members based on size (in terms of cleared volume 3 months prior to selection).
- Upon nomination, the clearing member has to nominate a DMC Member and a DMC Deputy and to provide CVs to prove that the nominees have sufficient knowledge and expertise to fulfil the required tasks within the DMC. Representatives from affiliated entities can be nominated as well.

Obligations during a clearing member default

- In case of a default, the current DMC Members
- make themselves available within a short period of time,
- identify suitable hedging strategies for the defaulted member's portfolio,
- support parametrization of auctions before auction takes place (e.g. duration of pricing period)

Hedging reduces sensitivity to market movements and stabilizes portfolios during auctions

Hedging to be executed on liquidation group level

Purpose of hedging

Hedging is an essential element of the DMP

– it enables Eurex Clearing to

reduce the impact of market movements during the DMP and

- stabilize the portfolios for liquidation auctions.
- Timely hedging is important to limit losses during the DMP.

Cornerstones

• In order to conduct efficient hedging, the following cornerstones are defined:

- For each liquidation group, a set of preferred instruments, qualified to reduce market, and potentially cash-flow risk is chosen.
- These instruments are product types of the liquidation group to be hedged.
- Decision on the respective hedging strategy will be taken by Eurex Clearing with recourse to advice of the DMC.
- The hedging strategy can be executed either bilaterally or via hedging auctions, with any transaction cleared at Eurex Clearing.

Hedge quality

- The quality of a hedge is measured in terms of reduction of the initial margin requirement.
- Reduction of risk sensitivities is the basis for the decision if and how to hedge.
- Available liquidity and cost of the hedge is considered.

Hedging Auctions

In the past, Eurex hedging process relied on the voluntary Clearing Member participation only. With the introduction of Hedging Auctions with an Opt-In mechanism for Clearing Members and clients (in agreement with their Clearing Member), Eurex Clearing intended:

- > To **Formalize** and improve the **selection of hedging counterparties**, to have committed and capable members supporting Eurex Clearing's portfolio hedging activities. The hedging counterparts will be known, the capabilities will be evaluated with the help of regular **Liquidity Surveys** and the process will be tested in fire drills.
- > To **Ensure** Eurex Clearing's access to broader Liquidity pools. The **accessible liquidity** influences the Liquidity Adjustment component of the Initial Margin. Commitment from a set of liquidity providers allows to account for indirect market access in the calibration of the Liquidity Adjustment.
- To allow those clearing members who want to benefit from such hedging transactions, to **participate** according to **fair** and **adequate incentives.** The participants can benefit economically winning the hedge-trade at their own price, seniorize their default fund tranche and support rebalancing of the CCP in a critical situation.

Hedging Auction Format

- Hedging auctions are designed to allow for a quick transfer of material market risk.
- The auction format is multi-unit with disclosed total size and number of auction participants, pay-as-you-bid, and two-way pricing.
- Hedging Auctions are executed via the Eurex Clearing Auction Tool.
- For each Liquidation Group, Eurex Clearing will invite opted-in Clearing Members and clients.
- Only in case the number of voluntary participants is insufficient to conduct successful Hedging Auctions, Eurex Clearing may appoint Clearing Members as Hedging Auction Participants according to Chapter 1, Part I, Number 7.5.2 (iii) (c) of the Clearing Conditions of Eurex Clearing.
- All participants in the auction will (generally) have the same minimum bidding requirements and will be allowed to bid
 for a larger portion than the requirement.
- The auction participants shall have the ability to show an "all or nothing" price.

An auction participant will know:	An auction participant will <u>not</u> know:	
The total size of the portfolio	The direction of the portfolio	
The number of auction participants	The identity of the other participants	

✓ Participants can assess the potential market impact in the pricing

✓ Information leakage and front running are prevented

Validity of a Mandatory Hedging Bid

 Precondition for the validity of a Mandatory Hedging Bid is the economical reasonability which is generally determined as meeting the condition of the "Maximum Hedging Spread Value":

Maximum Hedging Spread Value = Max(worst winning ask – worst winning bid,0) + distance parameter

Evaluation based on bid/ask of the respective portfolio -> Adapts the price tolerance to the market condition

A fixed component given ahead of the auction.

Where:

- Worst winning ask being the highest sell price accepted, if auction trades on the ask
- Worst winning bid being the lowest buy price accepted, if auction trades on the bid
- Distance parameter being a fixed number, defined for each auction by ECAG together with the DMC
- Participants know in advance how to avoid any penalties by knowing the fixed component.

Independent Sale: Selling portfolios independently through trading on-exchange or OTC

Eurex Clearing will sell 'small' or 'special' portfolios independently

- Flexibility is important in a default situation and some portfolios are rather suitable for an independent sale instead of a structured auction.
- 'Small', 'special' or dedicated asset class portfolios can therefore be liquidated by bilateral trades or on-exchange.
- An independent sale will be executed prior to an auction only if the respective losses do not exceed the defaulting clearing member's margin collateral and Default Fund contribution.

Small portfolios

A portfolio is regarded as small if the defaulting portfolio is not part of the top 50% clearing members ranked by initial margin.

Special Portfolios

A portfolio is regarded as special if less than or equal to five clearing members clear products in this liquidation group.

Bonds Portfolios

Due to the fragmented bonds market structure, bond positions are intended to be liquidated via bilateral trades.

Auction format for the liquidation group OTC Interest Rate Swaps

Auction Format

- One way, one off, sealed bid, single-unit auction per currency.
- Best bid takes the full portfolio all at the given price (No upper/lower limits on price).
- Individual OTC transactions will not be split.
- An OTC portfolio can only be split by currency and risk product.
- An auction portfolio might contain listed fixed income derivatives used for hedging purposes.



- Mandatory participation for clearing members active in the currency
 - holding the necessary clearing license to acquire the portfolio,
 - being active in the currency during the last 3 months prior to default.
- Non-mandatory clearing members and clients are allowed to submit bids in any auction should they wish to. Clients need the permission of their clearing member.
- Clearing members may be released from their mandatory bidding obligation based on:
 - the transactions entered by the clearing member,
 - the Initial Margin requirement of the clearing member with respect to the relevant Liquidation Group within 3 months prior to the default.

Auction format for the liquidation group Fixed Income Derivatives (ETD)

Auction Format

- Two-way, one-off, sealed bid, multi-unit, pay-as-you-bid auction with respect to identical auction units.
- Best bid wins the amount of auction units that it was provided for at the given price.
- A bid is economically reasonable if the price spread between the two prices submitted is within the given maximum spread, and any economically reasonable bid is accepted.

- Mandatory participation for all clearing members
 - holding the necessary clearing license to acquire the portfolio,
 - being active in the liquidation group during the last 3 months prior to default and
 - having the necessary infrastructure in place to process the products.
- Each auction participant is requested to bid at least for an individually defined minimum amount of auction units, depending on the initial margin of the auction participant relative to the overall initial margin in the liquidation group.
- The sum of the minimum amounts across all relevant clearing members exceeds 100% of the auction portfolio.
- Clients can participate in auctions with permission of a clearing member (bids are considered for the minimum bid size calculation).

Auction format for the liquidation group FX

Auction Format

- One-way, sealed bid, single-unit auction per currency pair.
- The best bid takes the full portfolio at the given price (no upper/lower limits on price).
- Individual transactions will not be split.
- Portfolio can only be split by currency pair.

- Mandatory participation for clearing members active in the currency pair
 - holding the necessary clearing license to acquire the portfolio,
 - being active in the currency during the last 3 months prior to default.
- Non-mandatory clearing members and clients are allowed to submit bids in any auction should they wish to. Clients need the permission of their clearing member.
- Clearing members may be released from their mandatory bidding obligation based on:
 - the transactions entered by the clearing member,
 - the Initial Margin requirement of the clearing member with respect to the relevant Liquidation Group within 3 months prior to the default.

Auction format for the liquidation group Equities Derivatives

Auction Format

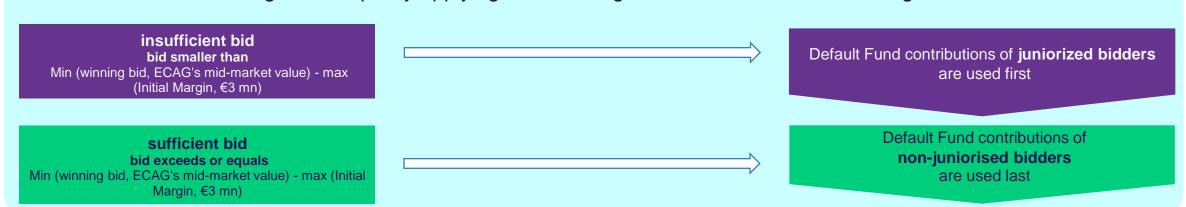
- Two-way, one-off, sealed bid, multi-unit, pay-as-you-bid auction with respect to identical auction units.
- Best bid wins the amount of auction units that it was provided for at the given price.
- A bid is economically reasonable if the price spread between the two prices submitted is within the given maximum spread, and any economically reasonable bid is accepted.

- Mandatory participation for all clearing members
 - holding the necessary clearing license to acquire the portfolio,
 - being active in the liquidation group during the last 3 months prior to default and
 - having the necessary infrastructure in place to process the products.
- Each auction participant is requested to bid at least for an individually defined minimum amount of auction units, depending on the initial margin of the auction participant relative to the overall initial margin in the liquidation group.
- The sum of the minimum amounts across all relevant clearing members exceeds 100% of the auction portfolio.
- Clients can participate in auctions with permission of a clearing member (bids are considered for the minimum bid size calculation).

Loss distribution and penalties set incentives to provide competitive prices in the auction

Loss distribution for liquidation groups OTC Interest Rate Swaps

Bids are ranked according to their quality applying the following formula relative to the winning bid



Formula contains two Safeguards to protect bidders against unfair juniorization:

- Eurex Clearing's own evaluation of mid-market value around the bidding time as minimum reference protection against case where winner has placed a bid significantly through the fair value.
- Fixed amount of EUR 3 million backstop in case of a low Initial Margin (IM) requirement applicable to the auction portfolio to protect bidders from getting technically juniorised, where operational costs of processing the portfolio is higher than the risk premium.

Other:

- Utilization amongst juniorised and seniorised Default Fund contributions is done on pro rata basis.
- Non bidders are juniorised and pay penalty, depending on their Default Fund contribution relative to the overall Default Fund contributions, capped at EUR 5 mn.
- If no bids are provided then Eurex Clearing approaches all clearing members to provide them with a "last look" opportunity to provide bids for the respective portfolio.

Loss distribution and penalties set incentives to provide competitive prices in the auction

Loss distribution for the liquidation group Equity Derivatives

- If during the auction not all positions are re-established, any non-bidding auction participant is subject to a contractual penalty, defined as a combination of:
- 1. Monetary fine of 500,000 EUR per 1% slice of the overall portfolio, for which the clearing member should have provided a bid, but failed to do so. The monetary fine is capped at EUR 5 mn. This monetary fine is not applicable if the third component of the contractual penalty applies.
- 2. Juniorisation of the clearing member's Default Fund contribution in case any losses occur which exceed the contributions of the defaulted clearing member.
- 3. Claim of Eurex Clearing towards the clearing member to cover the losses resulting from positions, for which Eurex Clearing remains unbalanced. This part of the fine can be avoided by voluntarily entering into respective transactions with Eurex Clearing at the auction price or a subsequently held independent sale, even after the auction was finalised.
- In case no auction unit has been auctioned, Eurex Clearing approaches all clearing members to provide them with a "last look" opportunity, to provide bids for the respective portfolio.

Independent sale as main component of default management process for bond liquidation group and replacement for special repo or GC Pooling transactions

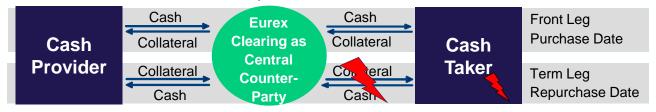
Clearing members can volunteer to be contacted by CCP in a crisis situation

- In the bond liquidation group, Eurex Clearing intends to sell all ISINs taken over from a defaulted Clearing Member via a so called independent sale.
- An independent sale (IS) means that **Eurex Clearing contacts potential counterparties** to sell the respective portfolios or ISINs. IS will be executed as voluntary auction with typically 3-5 participants via Eurex Clearing Auction Tool.
- Participation in an independent sale is voluntary.
 - Clearing members indicate towards Eurex Clearing via a Bond Trading Sheet for which bonds they would like to be contacted or have cash bond trading capabilities, whereby the execution would be via Bloomberg ALLQ.
 - Members typically provide bids for the full size but can also indicate otherwise.
- An independent sale can be either public (Eurex Clearing contacts multiple potential counterparties) or private (Eurex Clearing contacts one counterparty), and either on a sportfolio level or single / multiple ISINs.
- Independent sale can be unhedged or hedged with Eurex bond futures.
- An independent sale is successful if the prices provided by participating clearing members result in losses which
 do not exceed the collateral provided by the defaulted clearing member.
- Eurex Clearing will not use default fund contributions of non-defaulted clearing members, unless all respective clearing members have had the opportunity to provide a price for the portfolios or ISIN(s) in an auction.

Two-step liquidation needed for repo transactions

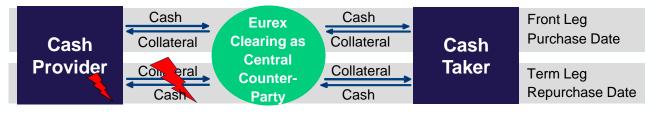
Overview of general liquidation process

- Due to the product characteristics of repo transactions, the DMP requires two steps*:
 - the CCP needs to buy or sell underlying bonds in the cash market.
 - the CCP needs to enter into a repo transaction replacing the one terminated with the defaulted clearing member.
- Cash taker default in a repo transaction:



If a cash taker defaults, Eurex Clearing acts as cash provider/ collateral taker in the frontleg of the replacement repo (performing a 'reverse repo'), and sells the underlying bond in the markets.

Cash provider default in a repo transaction:



If a cash provider defaults, Eurex Clearing buys the underlying bond in the markets and acts as cash taker/ collateral provider in the frontleg of the replacement repo (performing a 'repo').

• At maturity of the term leg, cash and bonds are exchanged via Eurex Clearing by the non-defaulted counterparty of the initial repo and the counterparty of the replacement repo.

^{*} Please note that the order in which the two steps are executed may vary, depending on the repo type (cash provider versus cash taker) and depending on whether it is a special repo or a GC Pooling transaction

Multi unit auction for remaining ISINs for long bond positions

Auction Format

- Eurex Clearing sub-divides cleared bonds into dedicated clusters with similar bonds grouped by currency, region and issuer/bond type.
- Auction participation requirements are based on the respective clusters.
- One way, one off, sealed bid, multi unit pay-as-you-bid auction with respect to identical auction units per cluster.
- Best bids win the bid on amount of auction units at the provided bid price.

- Mandatory participation for all clearing members
 - have been active in the respective bond cluster during the last 3 months prior to default,
 - for GC Pooling collateral taker, have filled out the bond trading sheet and

- The need to define bidding obligations only in proportion to a clearing member's risk exposure is a direct requirement of Article 37 (6) EMIR and serves to foster general market stability.
- Each auction participant is to bid at least for an individually defined minimum amount of auction units, depending on the initial margin of the auction participant relative to the overall initial margin in the bond cluster.
- The evaluation considers any activity across cash provider / bond purchaser and cash taker / bond seller.
- Clients can participate in auctions with permission of a clearing member.

Loss distribution and penalties set incentives to provide competitive prices in the auction

Loss distribution for Bond liquidation group

- To encourage clearing members to comply with their bidding requirements, Eurex Clearing will juniorise the default fund contributions of clearing members
 - not providing a valid bid during the bond auctions or
 - providing bids below a so called 'reference price*' defined in the Clearing Conditions.
- Any non-bidding bond auction participant is subject to a contractual penalty, defined as the lower amount of:
 - 1. a monetary fine of 5,000,000 EUR for any fraction of the portfolio (calculated on the basis of the Additional Margin Requirements) for which the CM should have submitted a bid or
 - 2. the sum of the Additional Margin requirements for all Bonds Auction Units for which the CM should have submitted a bid.

^{*} Reference Price: Worst Winning Bid – 0.5 Risk Parameter

Independent sale as main component of default management process for Cash Market position

- Eurex Clearing invites all clearing members to participate in a cash market product process.
- Participation takes place on a voluntary basis.

Purchasing principles for short positions

■ To prevent the clearing community from being cornered / squeezed, Eurex Clearing defines a maximum price accepted in the purchasing process per ISIN:

Maximum Re-Purchasing Price = minimum of

- a) Settlement price prior night + 0.5 * margin parameter
- b) Settlement price before day of default + 1.1 * margin parameter
- Only if all attempts to purchase a respective ISIN fail, Eurex Clearing will cash settle respective positions at the abovedefined maximum price.

Risk assignment (1/2)

Position allocation recovery tool

Legal requirement

Recovery tool

Annex, Section A (4): "The recovery plan shall include the following items: ...(4) a comprehensive range of capital, loss allocation, **position allocation** and liquidity actions required to maintain or restore the viability and financial soundness of the CCP including to restore its matched book and capital..."

Impact on ECAG

- The introduced amendment of the Clearing Conditions complements the currently available option to tear-up (cash settle) the entire Liquidation Group, which is too broad, by a more granular tear-up mechanism.
- The respective amendment of the 2021 Recovery Plan reflects the introduced PTUs as a loss allocation recovery tool.

Amendments to the Clearing Conditions

ETDs

- Pro-rata tear-up of open positions with non-defaulted Clearing Members, which have open cleared opposite positions that offset the defaulted Clearing Member's positions remaining on the CCP's book after unsuccessful liquidation attempts.
- For pricing of the positions, if reasonable bids are received during a
 partially successful auction, tear-up will be executed at auction price.
 As a fall-back tear-up it will be executed at the last available settlement
 price determined by Eurex Clearing.

Swaps

- Mandatory execution of hedging transactions with non-defaulted Clearing Members which have open positions in the affected product and currency at the time when the process is executed. Transactions will be executed at the last available settlement price. Once the portfolio of Eurex Clearing is hedged with the mandatory hedging transactions, another DMP auction attempt will be triggered.
- In case such an auction attempt fails, as a matter of last resort, the remaining portfolio will be transferred at the last available settlement price to all non-defaulted Clearing Members which qualify and have been invited to auctions as mandatory participants in the affected product and currency.

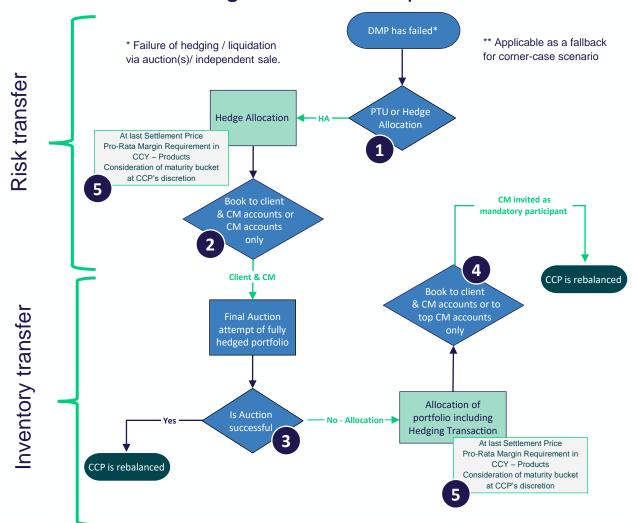


Amended Clearing Conditions effective as of 30 December 2020.



Risk assignment (2/2)

Process of risk assignment for swaps





Hedge allocation creates smaller risk shifts than PTU on minimal set level



<u>Hedges are booked to the end users</u> pro-rata based on open risk exposure towards the CCP. Treatment/passing on of recovery and resolution tools between Clearing Members and their clients is subject to bilateral agreements.



Portfolio allocation creates <u>smaller risk shifts</u> than cash settlement of a product in affected currency

Portfolio Allocation is <u>risk-free</u> and can be operationally better absorbed by <u>large</u> Clearing Members



Allocation Parameter

Hedge and portfolio trades allocation is based on:

- <u>Pro-rata 3-months IM requirement in the CCY-product</u>: ensures that participants receive risk in proportion to risk exposure towards the CCP which they can manage accordingly
- Flexibility for the CCP to further subdivide the IM requirement on maturity bucket level, considering following criteria:
 - Liquidity of the currency per tenor
 - Risk structure of the affected portfolio
- At last available Settlement Price: Most up-to-date stable price calculated by the CCP according to predefined rules which are transparent to the members

Clearing members' responsibilities within the DMP

Responsibilities within the process start prior to a default situation

	Obligation	Description
default	Nominate DMC Member	Clearing members participating in a Default Management Committee (DMC) need to nominate one DMC Member and one DMC Deputy, assisting the clearing house in supporting the hedging, Independent Sale and auctions during the Default Management Process in case of a clearing member default and for regular default simulations. Representatives from affiliated entities can be nominated as well.
Prior d	Participation in fire-drills	Clearing members are obliged to participate in regular fire-drills. The fire-drills are intended to test and evaluate the DMP, including (for example) pricing of portfolios.
g default	Provide contact details	To assist with communication, Eurex Clearing requires all clearing members to supply an appropriate DMP contact and DMP contact details.
	Providing market access to obtain best prices	Eurex Clearing expects non-defaulted clearing members to support the risk reduction process by providing the clearing house with competitive prices for hedge transactions or during an Independent Sale.
	Bidding in auctions	Non-defaulted clearing members are obliged to participate in the competitive auction process and submit prices for the hedged portfolio. Disclosed Clients or any other customer of a Clearing Member can participate in the auctions as well, thus fulfilling the bidding obligations of their clearing members (as applicable).
During	Taking on client positions from defaulted clearing member	Whilst clearing members are not legally obliged to take on clients from a defaulted clearing member they are expected to assist in the execution of the DMP. Clearing members therefore should work with clients seeking a new clearing member and, providing that the take-on of the client would not significantly impair the clearing member's own business objectives, be prepared to take on the client(s) trades and collateral in a streamlined and timely manner.

The legal framework is built upon three major documents ensuring the enforceability of the Default Management Process

Legal framework for DMP

Clearing Conditions

Default Management Committee Rules

Default Management Auction Rules

Chapter I Part 1 Number 7.5 of the Clearing
Conditions constitutes the legal framework for all
components of the Default Management
Process.

Chapter I Part 1 Number 6 of the Clearing
Conditions constitutes the legal framework for
the General Default Fund.

Default Management Committee Rules (DMC Rules) constitute the legal framework for the implementation of Default Management Committees regarding composition, procedures, legal relationship, general duties and liabilities of DMCs.

Default Management Auction Rules (DM Auction Rules) constitute the legal framework for the auction process regarding participation, preauction procedure, bidding procedure, determination of auction price and auction format.



Appendix

Eurex Clearing assigns products according pre-defined criteria

Liquidation group criteria

Liquidation process

- Products in one liquidation group follow the same liquidation logic:
 - Products follow the standard liquidation process with auction as central element
 - Products with deviating liquidation procedures need to be assigned to separate liquidation groups

Proximity

- Products within a liquidation group allow for objective proximity:
 - Proximate products have a set of common risk factors
 - Proximity represents market standard, regulatory and business understanding

Hedgeability

- Only products which can be hedged together are in one liquidation group:
 - Positions in one liquidation group can be stabilized in case of a default by means of a common pre-defined hedging strategy
 - Hedge-ability is validated in regular default simulations and internal periodic reviews
 - Hedge-ability is based on quantitative metrics

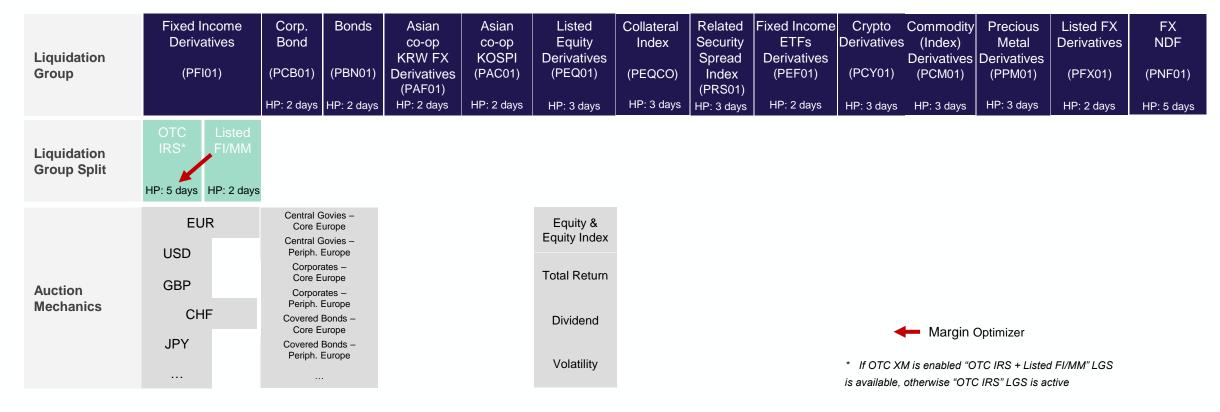
Priceability

- The products can be priced by market participants active in the Liquidation Group:
 - Simple extendibility of existing Pricing/Risk/Position management systems to process the product
 - Sufficient number of market participants should be able to price the products in a certain period of time
 - Price-ability is validated in regular default simulations together with all clearing members

Liquidation group setup

Each Liquidation Group has a pre-defined Holding Period (HP)

- In general, margin calculations and Default Management Process are performed on Liquidation Group level, however:
 - For Liquidation Group "Fixed Income Derivatives" Liquidation Group Splits "OTC IRS" and "Listed FI/MM" are in place whereby margin efficiencies can be achieved between the splits. For Liquidation Group "FX Derivatives" currently cross margining effects between the Liquidation Group Splits are not applicable.
 - Default Management Process is executed for "OTC IRS" per currency, for "Bonds" per predefined bond clusters due to market characteristics and respective setup on the member side.





Disclaimer

© Eurex 2024

Deutsche Börse AG ("DBAG"), Clearstream Banking AG ("Clearstream"), Eurex Frankfurt AG ("Eurex"), Eurex Clearing AG ("Eurex Clearing"), Eurex Repo GmbH ("Eurex Repo") are corporate entities and are registered under German law. Eurex Global Derivatives AG is a corporate entity and is registered under Swiss law. Clearstream Banking S.A. is a corporate entity and is registered under Luxembourg law. Eurex Frankfurt AG is the administrating and operating institution of Eurex Deutschland. Eurex Deutschland is in the following also referred to as the "Eurex Exchange".

All intellectual property, proprietary and other rights and interests in this publication and the subject matter hereof (other than certain trademarks and service marks listed below) are owned by DBAG or its affiliates and subsidiaries or used under authorization by their respective owners, including, without limitation, all patent, registered design, copyright, trademark and service mark rights. While reasonable care has been taken in the preparation of this publication to provide details that are accurate and not misleading at the time of publication DBAG, Clearstream, Eurex, Eurex Clearing, Eurex Repo as well as the Eurex Exchange and their respective subsidiaries, servants and agents (a) do not make any representations or warranties regarding the information contained herein, whether express or implied, including without limitation any implied warranty of merchantability or fitness for a particular purpose or any warranty with respect to the accuracy, correctness, quality, completeness or timeliness of such information, and (b) shall not be responsible or liable for any third party's use of any information contained herein under any circumstances, including, without limitation, in connection with actual trading or otherwise or for any errors or omissions contained in this publication.

This publication is published for information purposes only and shall not constitute investment advice respectively does not constitute an offer, solicitation or recommendation to acquire or dispose of any investment or to engage in any other transaction. This publication is not intended for solicitation purposes but only for use as general information. All descriptions, examples and calculations contained in this publication are for illustrative purposes only.

Eurex and Eurex Clearing offer services directly to members of the Eurex Exchange respectively to clearing members of Eurex Clearing. Those who desire to trade any products available on the Eurex market or who desire to offer and sell any such products to others or who desire to possess a clearing license of Eurex Clearing in order to participate in the clearing process provided by Eurex Clearing, should consider legal and regulatory requirements of those jurisdictions relevant to them, as well as the risks associated with such products, before doing so.

Only Eurex derivatives that are CFTC-approved may be traded via direct access in the United States or by United States persons. A complete, up-to-date list of Eurex derivatives that are CFTC-approved is available at: https://www.eurex.com/ex-en/rules-regs/eurex-derivatives-us/direct-market-access-from-the-us.

In addition, Eurex representatives and participants may familiarize U.S. Qualified Institutional Buyers (QIBs) and broker-dealers with certain eligible Eurex equity options and equity index options pursuant to the terms of the SEC's July 1, 2013 Class No-Action Relief. A complete, up-to-date list of Eurex options that are eligible under the SEC Class No-Action Relief is available at: https://www.eurex.com/ex-en/rules-regs/eurex-derivatives-us/eurex-options-in-the-us-for-eligible-customers. Lastly, U.S. QIBs and broker-dealers trading on behalf of QIBs may trade certain.

single-security futures and narrow-based security index futures subject to terms and conditions of the SEC's Exchange Act Release No. 60,194 (June 30, 2009), 74 Fed. Reg. 32,200 (July 7, 2009) and the CFTC's Division of Clearing and Intermediary Oversight Advisory Concerning the Offer and Sale of Foreign Security Futures Products to Customers Located in the United States (June 8, 2010).

Trademarks and Service Marks

Buxl®, DAX®, DivDAX®, eb.rexx®, Eurex®, Eurex Repo®, Strategy Wizard®, Euro GC®, FDAX®, FTSE 100, FWB®, GC Pooling®, GCPl®, MDAX®, ODAX®, SDAX®, TecDAX®, USD GC Pooling®, VDAX®, VDAX-NEW® and Xetra® are registered trademarks of DBAG or its affiliates and subsidiaries. MSCl®, EAFE®, ACWl® and all MSCI indexes"), the data included therein, and service marks included therein are the intellectual property of MSCI Inc., its affiliates and/or their licensors (together, the "MSCI Parties"). The Indexes are provided "as is" and the user assumes the entire risk of any use it may make or permit to be made of the Indexes. No MSCI Party warrants or guarantees the originality, accuracy and/or completeness of the Indexes and each expressly disclaims all express or implied warranties. No MSCI Party shall have any liability for any errors or omissions in connection with any of the Indexes, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. For full disclaimer see msci.com/disclaimer.

ATX®, ATX® five, CECE® and RDX® are registered trademarks of Vienna Stock Exchange AG. IPD® UK Quarterly Indexes are registered trademarks of Investment Property Databank Ltd. IPD and have been licensed for the use by Eurex for derivatives. SLI®, SMI® and SMIM® are registered trademarks of SIX Swiss Exchange AG. The STOXX® indexes, the data included therein and the trademarks used in the index names are the intellectual property of STOXX Limited and/or its licensors. Eurex derivatives based on the STOXX® indexes are in no way sponsored, endorsed, sold or promoted by ISS STOXX and its licensors and neither ISS STOXX nor its licensors shall have any liability with respect thereto. PCS® and Property Claim Services® are registered trademarks of ISO Services, Inc. Korea Exchange, KRX, KOSPI and KOSPI 200 are registered trademarks of Korea Exchange Inc. The names of other companies and third-party products may be trademarks or service marks of their respective owners.

FTSE® is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited ("FTSE") under license. All rights in the FTSE®100 Index (the "Index") vest in FTSE or its licensors. Neither FTSE nor any of their affiliates or licensors (a) assumes any liability, losses, damages, expenses or obligations in connection with any derivative product based on the Index; or (b) accepts any liability for any errors or omissions, fitness for a particular purpose or the results to be obtained from the use of the Index or related data. No party may rely on the Index or related data contained in this communication which Index and data is owned by FTSE or their affiliates. No use or distribution of the Index is permitted without FTSE's express written consent. FTSE does not promote, sponsor or endorse the content of this communication nor any financial or derivative product that it relates to.

PRIIPs: Eurex Deutschland qualifies as manufacturer of packaged retail and insurance-based investment products (PRIIPs) under Regulation (EU) No 1286/2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs Regulation), and provides key information documents (KIDs) covering PRIIPs traded on Eurex Deutschland on its website under the following link: https://www.eurex.com/ex-en/rules-regs/priips-kids.

In addition, according to Art. 14(1) PRIIPs Regulation the person advising on, or selling, a PRIIP shall provide the KID to retail investors free of charge.

EUREX

29 03 April 2024