OTC Derivatives Clearing in Practice

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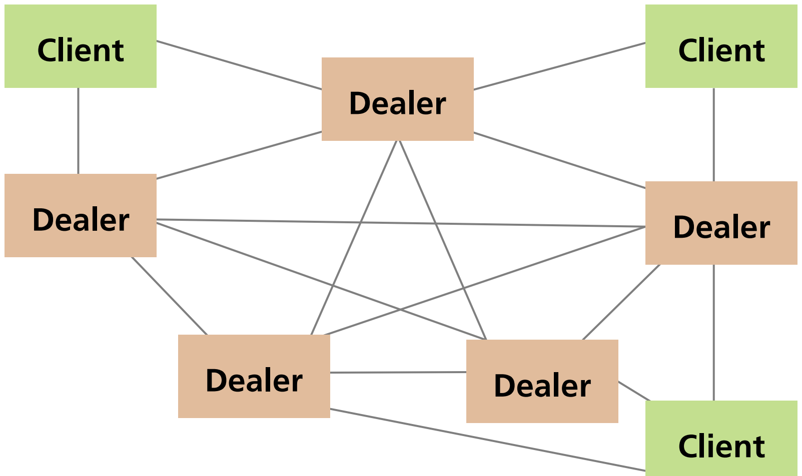
Clearing Terms

CCP	A central counterparty (clearing house) Is the clearing member's legal counterparty for a cleared trade.
Clearing Member	Member of a clearing house Has to fulfill the clearing house's requirements and obligations.
Clearing Broker	Member of a clearing house that offers client clearing. Is the client's legal counterparty within the client clearing setup.
Client / RC	Registered client of a clearing broker
Client Clearing	Describes the clearing via a clearing broker
Segregation	Allows separation of the collateral of the various clients at the clearing house and therefore allows segregation in case of a default (omnibus model versus individual segregation model)

OTC Derivatives Clearing

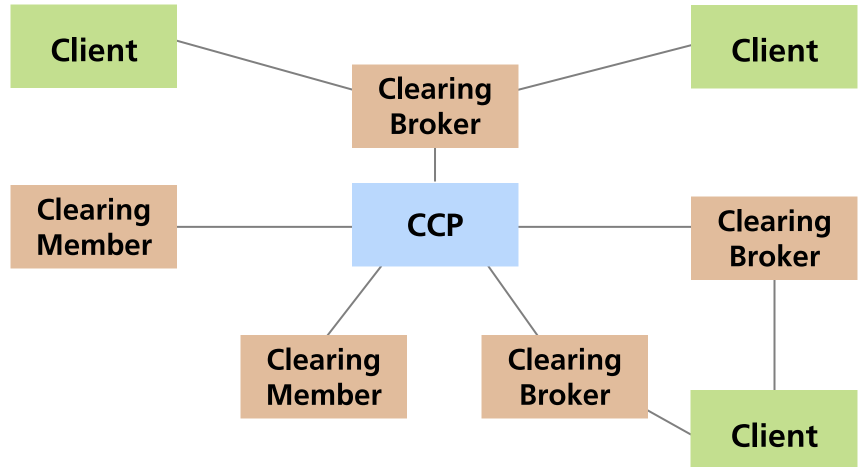
Transformation of the OTC derivatives market – Reduction of complexity

Web of bilateral OTC derivatives



- Prior to the financial crisis, OTC derivatives were mostly held bilaterally and hardly collateralised.
- A complex and opaque web of counterparty credit risk emerged, which amplified the financial crises through a higher systemic risk.

Central counterparty clearing



- In the future all standardised OTC derivatives have to be centrally cleared.
- The counterparty credit risk is transferred to the CCP (central counterparty) and reduced by the exchange of initial and variation margin.
- The likelihood of an adverse impact from a counterparty default and the complexity is substantially reduced.

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Mandatory clearing and collateralisation

Mandatory clearing for standardised OTC derivatives	▪ Going forward standardised OTC derivatives have to be cleared via a clearing house. ▪ Proposals in the ESMA consultation paper: Basis Swaps; Fixed-to-float interest rate swaps; Forward rate agreements Overnight index swaps; European untranched Index CDS ▪ Under EMIR the regulation will come into force earliest mid 2015.
Mandatory collateralisation for bilateral (uncleared) OTC derivatives	▪ Today it is already market practice to collateralise the sum of the daily exposure changes of OTC derivatives (variation margin). ▪ Going forward the collateralisation with variation margin as well as initial margin is going to be mandatory between «financials» and other systemic relevant companies. ▪ Collateralisation in cash has to be hold fiduciary, whereby the granting of interest would not be possible. ▪ BCBS IOSCO affects all OTC derivatives, i.e. also FX, equity, interest, commodities and credit transactions.

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Clearing obligation
Options for market participants

With the clearing obligation all clearable OTC derivatives (e.g. interest rate swaps) will have to be cleared through a central counterparty (= clearing house). Market participants that trade those kinds of OTC derivatives have the following strategic options to clear them:

- No reaction, whereas the trading of interest rate swaps would not be possible anymore.
- Evaluation of a clearing broker.
  - ➡ Decision criterias: product offering, access to clearing house, clearing broker's rating
  - ➡ Project costs (new post-trade and operational processes, amendment of the collateral risk management and accounting processes)
- Becoming a member of a clearing house.
  - ➡ High flexibility and possibility to offer client clearing
  - ➡ High project costs, membership fees, fire drills (valuation of high volumes of trades within 24 hours), default fund contribution and the replenishment of the default fund have to be factored in

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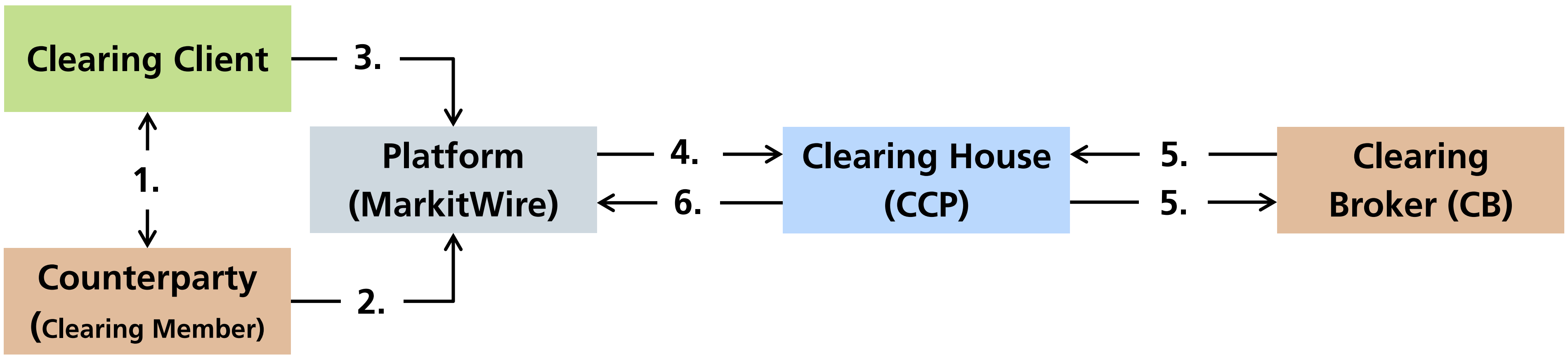
Clearing workflow via clearing broker

from the view of a clearing client for an interest rate swap trade



1. An interest rate swap is traded with any counterparty.
2. The counterparty enters the trade into MarkitWire.
3. The clearing client receives the trade in MarkitWire, checks it, chooses the clearing broker and affirms the trade in MarkitWire.
4. Eurex receives the trade via MarkitWire, performs the necessary checks and starts the novation process.
5. With the start of the novation process, the clearing broker receives notification of the trade also via MarkitWire, checks the credit limits and accepts the trade for clearing.
6. After the checks, Eurex sends the clearing confirmation to MarkitWire and the status of the trade is changed to «cleared». (The legal counterparty of the trade changes form the original counterparty to the clearing broker!)

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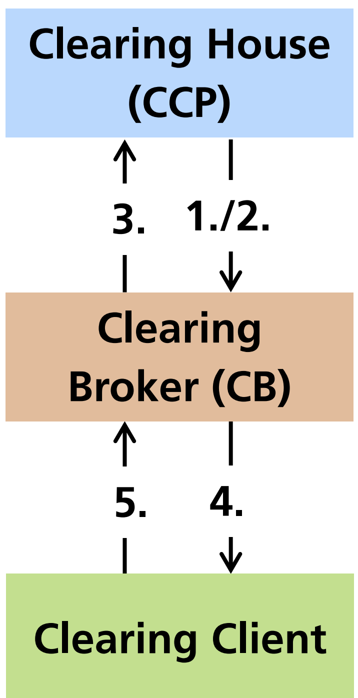
Margining workflow
Process and timings



1. CCP sends the trade positions and margin requirements multiple times per day.
2. The clearing broker's account at the clearing house is debited.
3. The clearing broker meets the margin requirements for its own and the positions of its clients.
4. The clearing broker sends the margin call to the client (once a day).
5. The client settles the margin call (initial margin, variation margin) and pays or receives cash flows from swaps, interest from cash margins and pays commissions.

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Margining calculation

Initial margin and variation margin

	Margin Calculation	Collateralisation
Initial Margin (IM)	▪ The initial margin should cover market fluctuations after the default of a clearing member. ▪ Clearing house calculations are based on a portfolio simulation considering the historically most extreme market fluctuations.	▪ Initial margin has to be provided in cash or securities.
Variation Margin (VM)	▪ The variation margin is the daily settlement of profits and losses of the transactions. ▪ It is calculated by netting all replacement values of the transactions by currency buckets.	▪ Variation margin has to be provided in cash in the respective transaction currency.

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