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# Risk Management in Central Counterparty Clearing

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European Central Counterparty is a subsidiary of  
The Depository Trust & Clearing Corporation

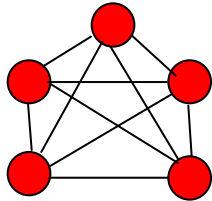


# What are the risks?

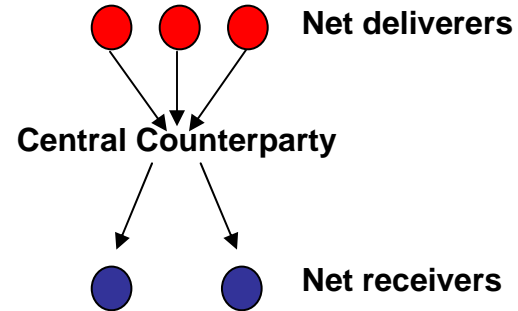
- The function and value of CCP clearing
- Where risks arise
- How risks can be managed
- Interoperability – a short overview



# A central counterparty reduces costs....

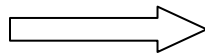


Without CCP,  
one settlement per trade,  
with many parties



With CCP netting,  
one settlement per security,  
with one party

**100 trades**



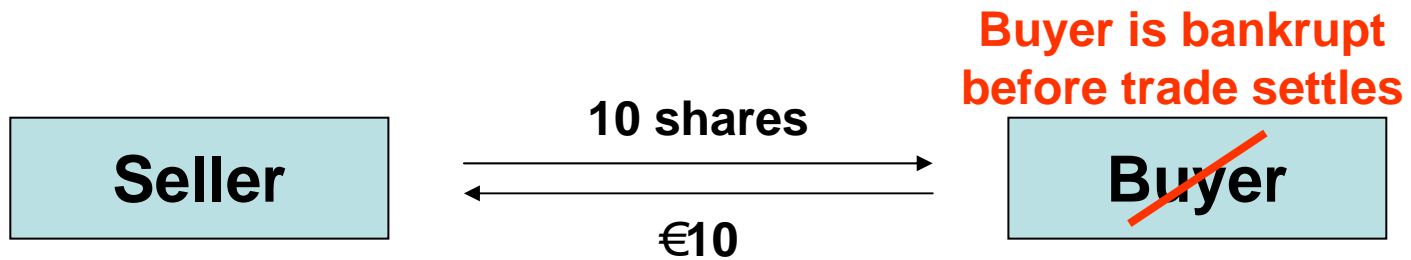
**< 5 settlements after netting**

**=**

**> 95% savings in settlement**



.... and provides protection....

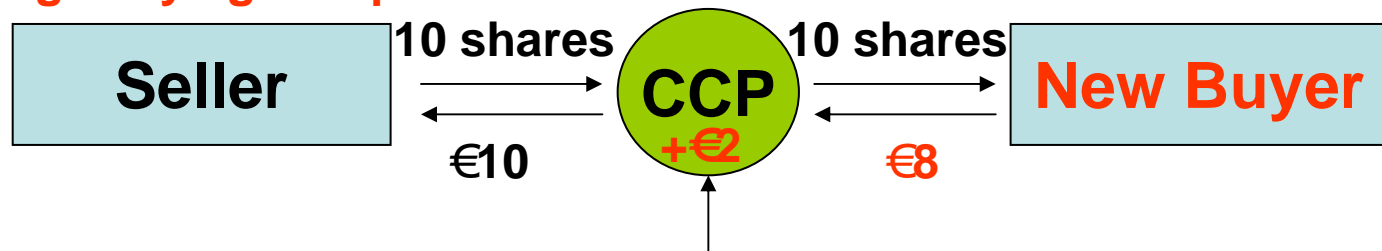


- The surviving party has to replace the trade, potentially at an unfavourable price



## ....against replacement cost risk

**With a CCP, trade settles at the originally agreed price**



**CCP covers market risk with margin collected from Bankrupt Buyer**

A CCP adds most value when:

- Probability of bankruptcies is high
- Price of securities is volatile

A CCP must be robust itself – “never go bankrupt”



## A CCP will itself fail if...

One or more Participant is bankrupt before settlement...

and

...the margin collected from the Participant(s) is insufficient to cover losses from replacing trades at unfavourable prices...

and

...the CCP has insufficient other resources to cover the losses



# A CCP needs cumulative defenses

1. Minimum standards of Participants' size and profitability
2. Sophisticated risk management methods
3. Safety nets:
  - CCP's profits, equity
  - 3<sup>rd</sup> party/parent guarantee
  - Insurance
  - Default fund (loss share)
  - ...

- 10 CCPs have different business models
- 10 CCPs' reliance on different lines of defense varies
- 10 CCPs manage risks in different ways



## A CCP's robustness is affected by....

- Its experience with CCP participant defaults: know-how in minimising market disruption and its own exposure
  - Number of close outs and bankruptcies handled
  - Strength and depth of management
- The rigour of its participant admission criteria, process and ongoing financial health monitoring
- Its technical competence in calculating sufficient margin and ability to collect the margin
- The reality, size, and quality of its safety nets in case there is insufficient margin collected from a bankrupt participant



# CCPs need to manage other risks

- Legal certainty that its rules can be enforced on a bankrupt participant
- Liquidity and ability to settle
- Business continuity arrangements for large scale or operational disruptions
- Capacity to handle peak volumes
- Exposure to other entities – repo counterparties, cash settlement bank, collateral agent, sister company that is also a participant, other CCPs linked through interoperability ...



# Safety could be illusory

- Users generally do not have the CCP risk management expertise or sufficient information to distinguish differences in quality and approach of CCP risk management
- “Safety is a given.” Possibly, users and trading venues do not consider that a regulated CCP could be allowed to become bankrupt
- Risks introduced by interoperability are not widely understood



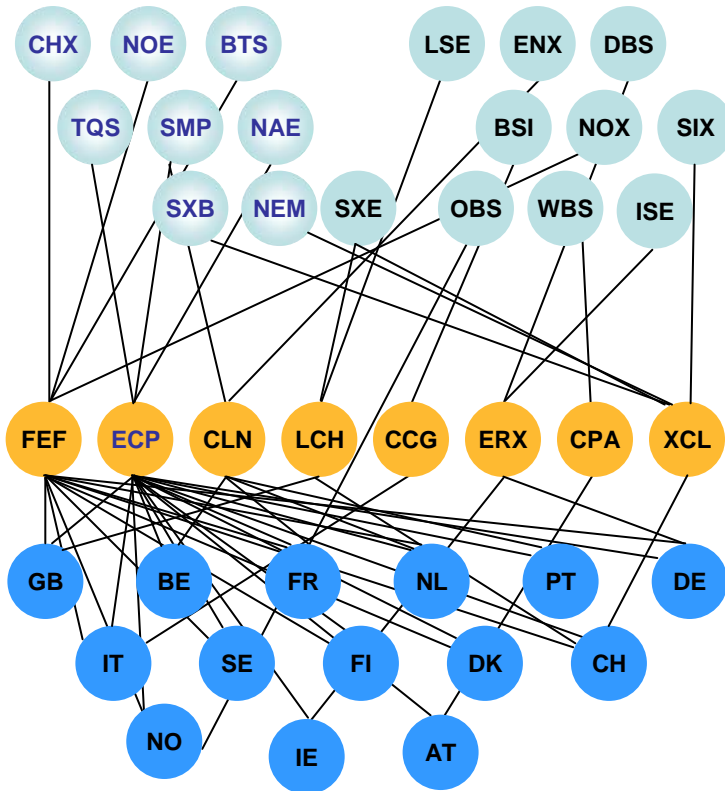
# Users usually focus on processing costs

- Unit cost of clearing a trade
- Amount of margin required by the CCP
- Interest paid by CCP on cash margin
- Settlement costs
- Penalties levied on delayed settlement



# New entrants create more competition

## Europe 6 months ago

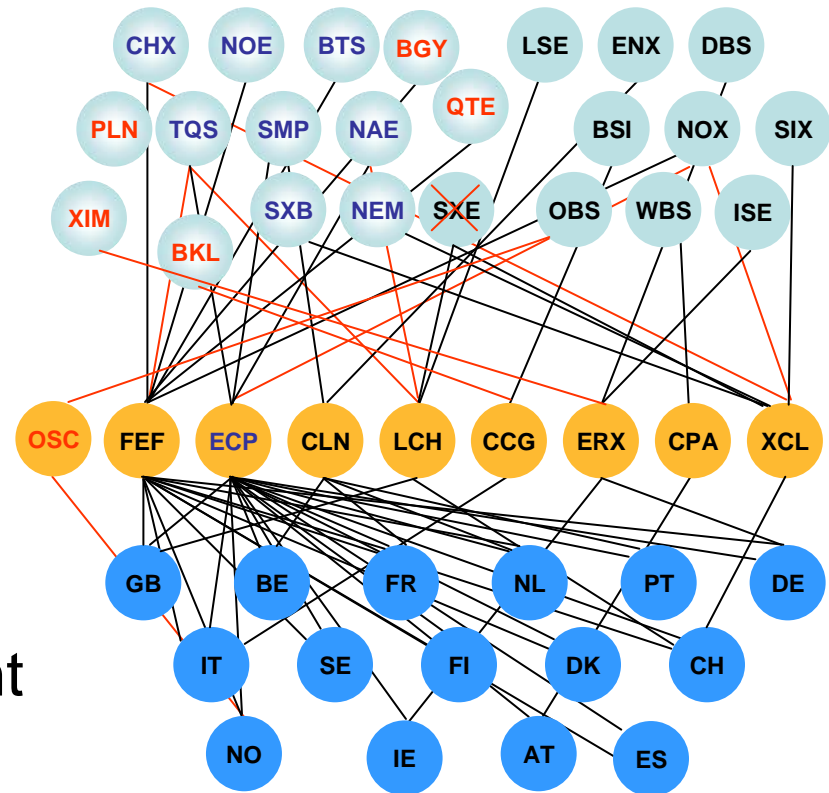


Trading

Clearing

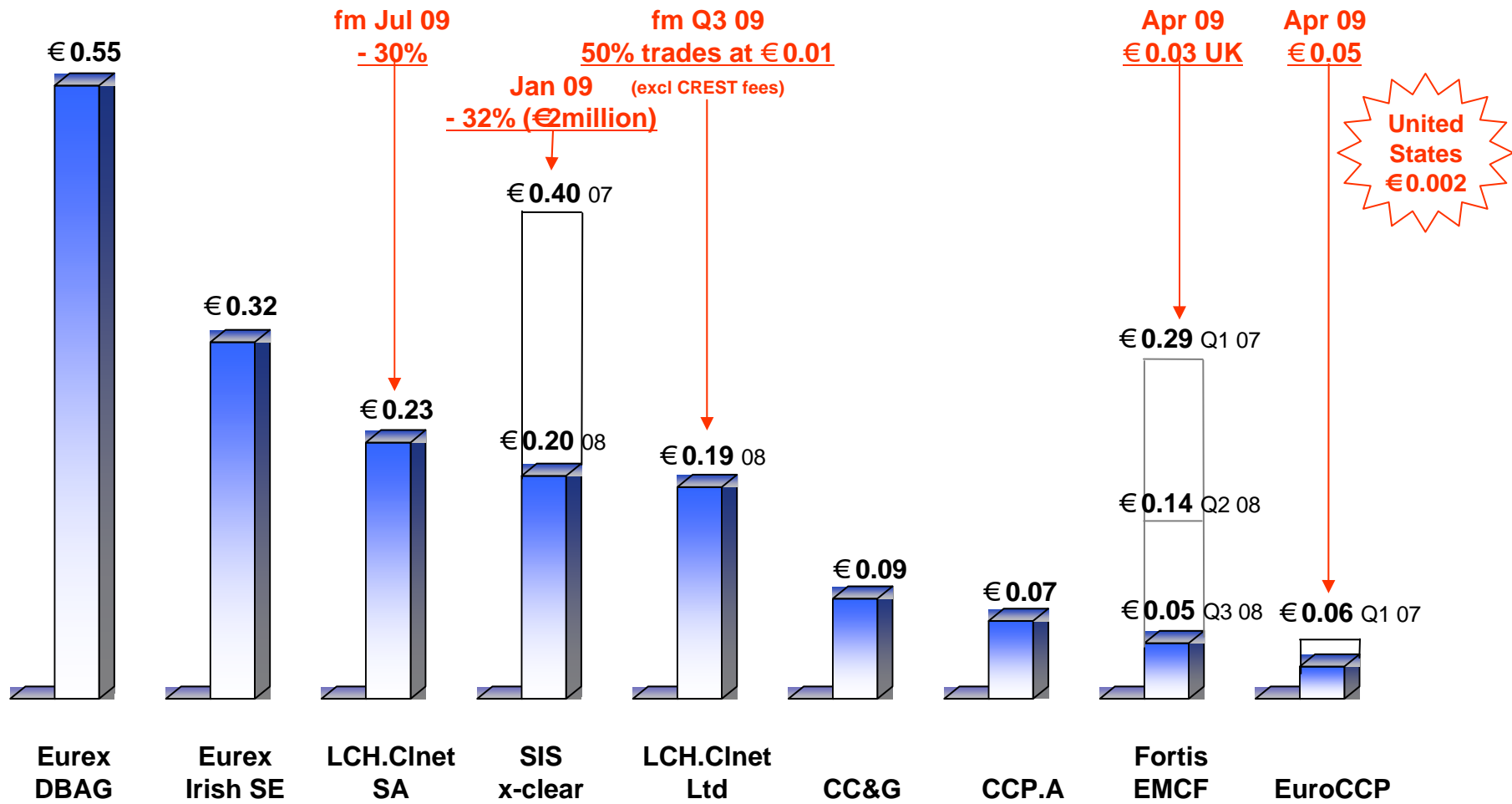
Settlement

## Europe Today





# There is a price war: Q2 08 vs Q2 09

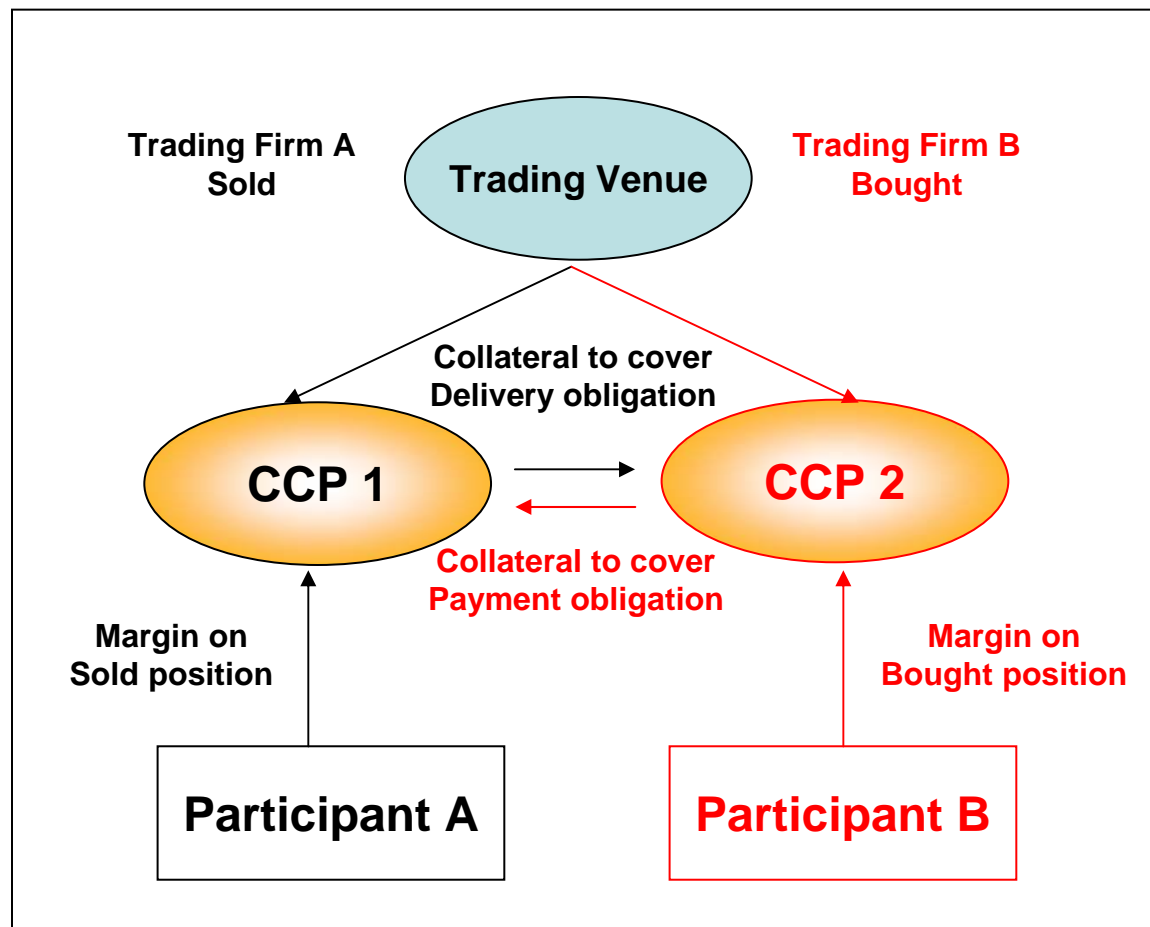


Source: EuroCCP cost comparison of July 2007, from publicly available information



# Interoperability enables competition

1. Trading venue sends trades to the CCP selected by the Trading Firm
2. Each CCP manages its exposure to the other's inability to fulfill obligations by collateralisation
3. If CCP 1 is bankrupt, CCP 2 will use collateral from CCP 1 to cover any losses and expenses involved in closing out CCP 1 obligations to CCP 2





# Interoperability has associated risks

- Membership rules do not apply
  - Access to a trading venue's trade flow requires interoperability with the incumbent CCP
- Potential problems with return of margin
  - Return of margin by the bankrupt CCP could be challenged or not timely, causing outright loss or liquidity problem for the healthy CCP
- Safety nets may not be available
  - Code of Conduct Guideline specifies, “No CCP is obliged to contribute to the other CCP's participants' default fund or other post default backing schemes”



# Users : you are the choosers

Which business model do you want for the future of clearing in Europe?

- Business model
  - For profit
  - At cost
- Governance
  - Users' power, to make what decisions
  - Degree of transparency to users
- Ownership
  - Exchange / trading venue (source of profits)
  - Bank (GCM business synergies)
  - User-investors (dividends, valuation of CCP)
  - Users (low usage fees, risk mutualisation)