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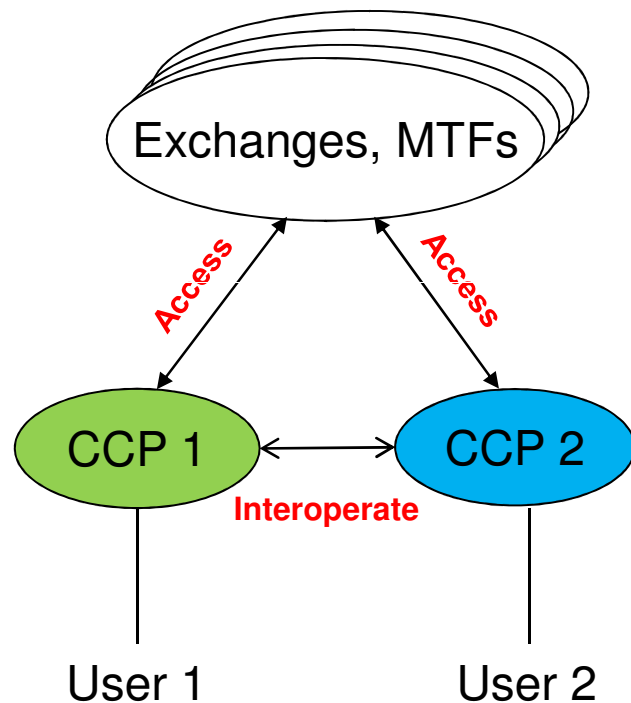
18 May 2011

Interoperability Update

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Why users demand interoperability



Interoperability reduces risk

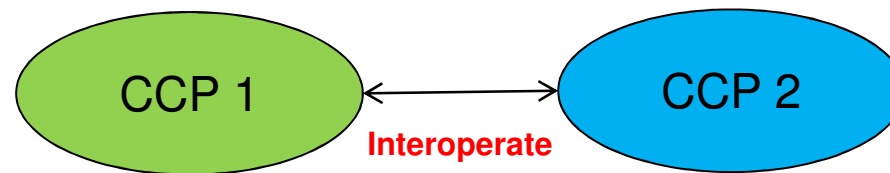
- Users can select the most robust CCP according to their own safety criteria.
- Through effective competition, CCPs in Europe will likely consolidate to fewer, stronger CCPs with scale economies.
- Using a CCP of a firm's choice reduces operational risks, cuts financial exposure through more netting, and avoids exposure to multiple CCP loss-sharing arrangements.

Interoperability reduces cost

- A firm that can use its CCP of choice across multiple trading venues saves connectivity, operations, clearing, collateral and settlement costs; post-Basel III, also capital requirements.



Managing the risks of interoperability



Interoperating CCPs must ensure they are protected from the other CCP's default. Each CCPs must:

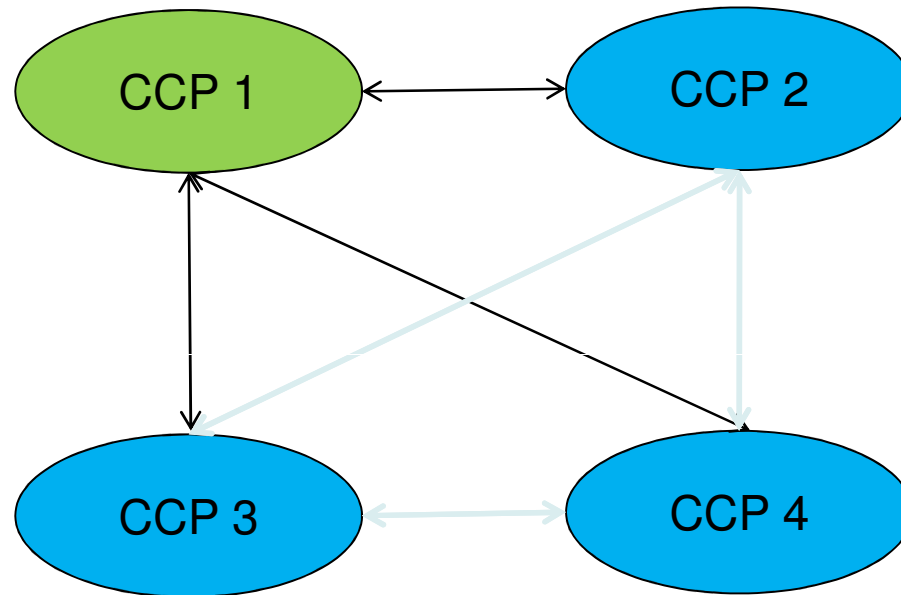
- Calculate sufficient collateral required from the other CCP.
- Collect collateral from the other CCP in a timely manner.
- Utilise collateral received without challenge, if the other CCP defaults.
- Retrieve collateral given to the other CCP, if the other CCP defaults.

Similar to protection against a customer default, except retrieval of collateral.



Multi-CCP interoperability issues: 1

Visibility



Bilateral links between CCP2, CCP3 and CCP4 must also be visible to CCP1.

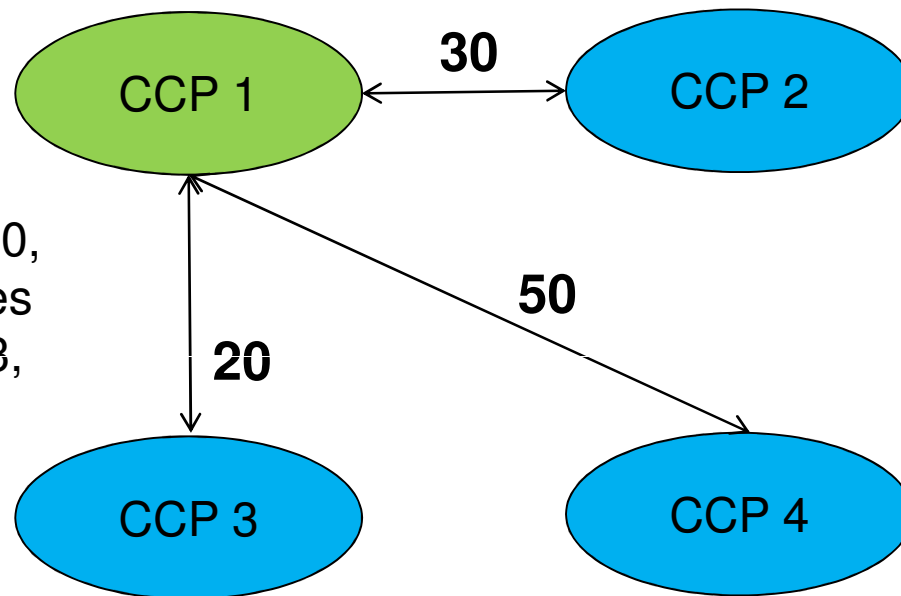




Multi-CCP interoperability issues: 2

Margins

CCP 1's customer bought 30, bought 20, and sold 50 to parties using CCP 2, CCP 3, and CCP 4 respectively.



CCP 1 has margin obligations towards CCP 2, CCP 3 and CCP 4 even though it may not collect margin from its own customer, who has a flat position.



Joint Regulators' Principles

Calculate sufficient collateral required from the other CCP.

- Collateral to be additional to that already held for mitigating member default (addresses multi-CCP interoperability margin issue).
- Collateral must be pre-funded actual assets, not guarantees.

Collect collateral from the other CCP in a timely manner.

- Minimise interval between inter-CCP margin calls and collateral transfers.
- Ability to call margin intra-day.
- Predict increase in inter-CCP exposure during quarterly peak periods and ensure credit exposures mitigated appropriately.
- Arrangements for inter-CCP collateral to be held.
- Application of the CCPs' individual settlement finality arrangements.

Utilise collateral received without challenge, if the other CCP defaults.

Retrieve collateral given to the other CCP, if the other CCP defaults.

- Collateral must not be trapped in a defaulted CCP's estate.



Additional requirements - examples

- Arrangement be scalable to additional volumes, additional CCPs, additional trading venues.
- Interoperability agreements be transparent to other CCPs and clearing members (addresses multi-CCP interoperability visibility issue).
- Business continuity arrangements set up between CCPs and trading venues.
- Satisfactory performance and/or arrangements for:
 - Risk assessment performed on the other CCPs.
 - Assessment of any additional risks due to interoperability.
 - Project management, review and governance processes.
 - Inter-CCP risk management process, policies, procedures and rulebook changes.
 - Inter-CCP operational procedures, including notification to interoperating CCPs of material change in one's risk profile including addition of interoperating link.
 - Final versions of test plans and test summary reports.
 - Default procedures.



Access: essential to deliver user choice

Equities Trading Venue

Current Access to Trade Feed EuroCCP x-clear LCH EMCF

London Stock Exchange	–	Y	Y	–
NASDAQ OMX Nordic Exchanges	*	*	–	Y
SIX Swiss Exchange	–	Y	Y	–
BATS Chi-X	–	–	–	Y
Turquoise	Y	*	*	–
NYSE Arca Europe	Y	–	–	–
SmartPool	Y	–	–	–
Pipeline	Y	–	–	–
Quote MTF	–	–	–	Y
Burgundy	–	*	–	Y
UBS MTF	*	Y	–	–
Sigma X	Y	–	–	–

Full access to all platforms cleared by interoperating CCPs is needed for users to have meaningful choice.

* Pending interoperability