



Interoperability Update Stockholm

16th June, 2010

Agenda

- Background to interoperability initiative
- Agreed model of interoperability
- Next steps
- Q&A

Competition fueled by MiFID has brought improvements but increased post-trade complexity

Benefits

- Low costs
- Member Consultation
- Increased cross-border trading

Disadvantages

- Increased connectivity costs
- Fragmentation of clearing volumes

Consolidation of clearing volumes is needed to decrease cost of fragmentation

For example:

To offer best execution in FTSE 100 securities a trading firm today needs:

SOR technology

7+ exchange memberships

3 CCP memberships

Complicated treasury functionality

Insight into the rules and regulations of 10 -15 entities

Interoperability: why it is important from the user's perspective

Benefits of interoperability

Full competition and user choice of a CCP

Consolidation of settlements and risk management

Single CCP connection

Reduction of capital needed for trading European securities

Lower frictional costs of trading and increase trading volumes

NASDAQ OMX chose to support and promote interoperability in an early stage

Achieving interoperability short term will be a challenge but it can be done

Challenges

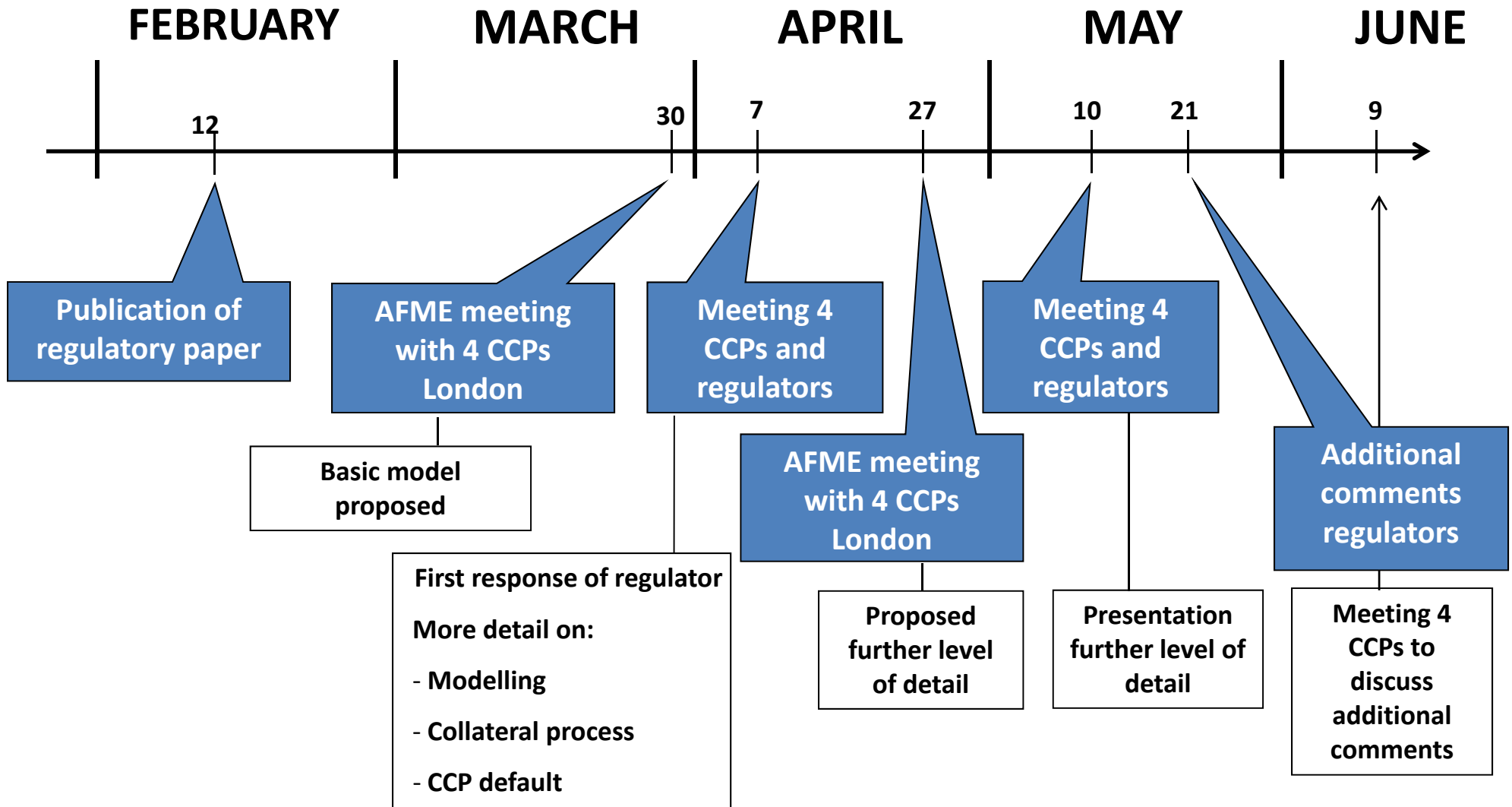
Mitigate and monitor additional systemic risk issues

Expand interoperability beyond the MTF sphere – engage incumbent exchanges

Create a level playing field for CCP services – all CCPs are different

Meet the expectations of participants as to the transparency of the new framework

What happened in 2010 so far?



Agreed model

- CCPs agreed that there are 3 main areas to cover:
- New collateral is required in the system
- CCPs must fully collateralise each other as a regular clearing member
- The proposal must be scalable
 - both in terms of obtaining new collateral;
 - the amounts of new collateral; and
 - the number of CCPs interoperating under the model

Details to the agreed model

- Each CCP will collateralise other CCPs with which it is interoperating to 100% of the value calculated by their standard initial margin requirement as for a clearing member
- No contributions to each others default funds
- Each CCP will source additional collateral, representing the amounts above either directly from their users or from an additional source.
 - Where the collateral is sourced from users all CCPs agree it will be apportioned across members that benefit from interoperability
- The additional collateral sourced will be passed to the interoperating CCP in a manner consistent with the following principles
 - The collateral must only be available to the receiving CCP in the event of the default of the linked CCP who has posted the collateral
 - The providing CCP must be able to remove and replace the collateral at its discretion and, crucially, the collateral must not be 'trapped' in the event of the receiving CCPs insolvency
 - Many CCPs envisage undertaking this through a market standard Euroclear pledge agreement
- Exchange of collateral: frequency

Key assumptions

- All 4 CCPs interoperating across all platforms and all products
- Interoperability will change users behaviour and consolidate business with CCP(s) of choice
- Major users have indicated significant reduction in collateral through consolidation; we have applied 2 scenarios: 30% and 50% ratios to be conservative across all users

Collateral requirement for users

- Consolidation benefits arising from interoperability will see:
 - average total initial margin across 4 CCPs reduce to:
 - €1,050mn ($€1,500 * 70\%$)
 - €750mn ($€1,500 * 50\%$)
 - following this logic the peak could be €1,700 - €2,380mn but this undoubtedly overstates considerably

How does this translate into inter-CCP collateral requirements?

- Total market requirement: €1,050mn and €750mn
- We expect (based on some testing) on an average basis to exchange 45% of this due to consolidation of inter-CCP portfolios:
 - $€1,050mn * 45\% = €472.5mn$
 - $€750mn * 45\% = €337.5mn$

This translates into daily average of €85 -118mn per CCP distributed across its participants.

“Flat CCP Scenario”

- Although theoretically the possibility exists that one CCP is completely flat internally but not against the other CCPs
- Assuming trading evenly spread across 4 CCPs, probability is 0.375 per ISIN
- For the top 100 securities the probability is 0.375 to the power 100
- Therefore, the probability of it happening and it being material is negligible
- On the other hand, from our (limited) tests it appears that there is wide variance in the inter-CCP consolidation percentage. Most likely this is due to the fact that the distribution of the trades across CCPs matters
- As such the 45% consolidation assumed above, can be quite different. To be conservative we have assumed additional inter-CCP margin of 25% i.e. instead of 45% it would be 70%
- This equates to an additional €188-263mn on average numbers and €425-595mn on peak numbers

Conclusion

- There are many variables to consider and we do not know the future trading patterns and behaviours or distribution of participants across CCPs
- We have attempted to model the likely behaviours using conservative assumptions
- We expect the overall level of collateral to reduce through interoperability; however,
- Our modelling indicates total collateral in the system post-interoperability between 85%-119% of pre-interoperability levels
- Our conclusions are that the likely 'additional' day-to-day and peak collateral requirements are entirely manageable within the range:

(€ millions)	Average	Peak
Range per CCP	131-184	298-417
Est. per participant	13-18	30-42

Collateral Timeline

- All CCPs intend to utilise Euroclear or a similar CSD pledge arrangement for collateral
 - This ensures that the collateral remains in the name of the pledging CCP and is only available in the event of a CCP default, i.e. it will not be tied up in any administration process
 - ❑ Both cash and collateral can be pledged using this arrangement
 - ❑ The proposed collateral pledging timeline is outlined below
- CCPs will only make calls on each other based on end-of-day positions
- End-of-day means that each CCP will know its exposure to the other at 9am next day
 - ❑ A CCP will request additional collateral to be pledged within 24 hours by 9 am on T+1 either in cash or securities
 - ❑ The recipient of the request will call for additional funds from its members (or other sources) for value T+1

Action points from last meeting with UK, Swiss and Dutch regulators

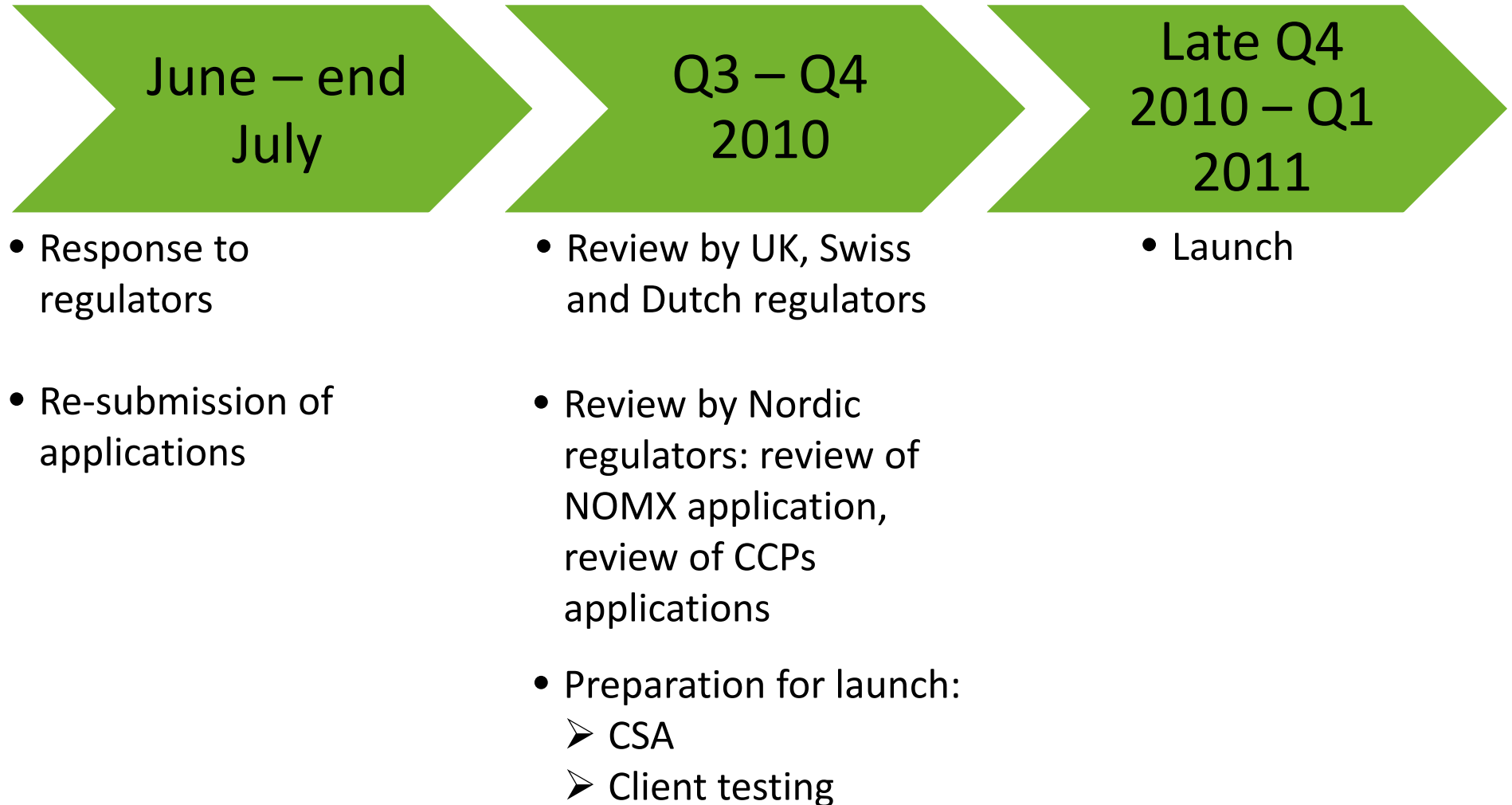
- Further details on the processes relating to collection and transfer of collateral. Full collateralisation expected on T+1
- Further details on BCP plans and cases of technical defaults by interoperating CCP
- Inter-CCP credit exposure to be stress-tested
- Transparency of link clearing agreements
- Review of suitability of CCP settlement liquidity arrangements
- Review of compatibility of settlement finality arrangements
- Each CCP to confirm market segments to be covered by interoperability
- Each CCP to provide model of financing of inter-CCP collateral requirements

Re-submission of applications to regulators

CCPs to provide:

- Link Agreements
- Inter-CCP Procedures
- DR arrangements
- Any changes to rules, policies, processes or procedures
- Test plan and test report

Timeline (estimate)



Questions & Answers

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