



# Discussion of Simulation of liquidity savings in SSSs, Jenni Koskinen (Bank of Finland)

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## Agenda

- Simulating securities settlement
  - Data
  - Specificities of the Finnish system
  - Approach
- Liquidity savings : evidence from payment systems
  - Liquidity pooling
  - Optimisation algorithms
- Securities settlement and consolidation...
  - Consolidation: some recent examples
  - What has it brought to the market?...to be continued as NCSD joins Euroclear
- Other interesting areas for future work
  - Outstanding questions
  - Additional areas of research

## Simulating securities settlement

- Data
  - 4 days of data (April 2008) from equities and bonds SSS
    - ✓ How representative of transaction patterns?
- Specificities of the Finnish system
  - Until 1996, different SSS for bonds and equities
  - After the merger: 2 different sub-systems, with cash settlement on different accounts at the BoF
  - Comparable situation in other EU countries (eg Belgium)
- Approach: analyse liquidity savings stemming from
  - applying HexClear's settlement algorithm (including optimisation) to bonds > netting effect
  - the use of same vs. different funds accounts for equities and bonds settlement > liquidity pooling

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## Liquidity savings: evidence from payment systems

- Liquidity pooling
  - Ancillary systems => liquidity fragmentation
  - Tiering benefits in correspondent services (simulation for UK system CHAPS) (Tudela & Lasasosa, 2006)
    - ✓ liquidity pooling: more beneficial than internalisation
  - TARGET 2
    - ✓ Liquidity pooling by means of a virtual account
- Numerous studies on the impact of optimisation
  - latest: "A study of competing designs for a liquidity-saving mechanism" (McAndrews & Martin, 2008)
  - ...but also Leinonen, Soramaki, Bech and many others.

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## Securities settlement and consolidation...

- Consolidation: some recent examples
  - 1999: SEGA + Intersettle > SIS SegalInterSettle
  - DTC + NSCC > DTCC
  - 2000 Deutsche Börse Clearing + Cedel > Clearstream Int.
  - 2001, 2002, 2006: Sicovam, Necigef, CREST, CIK merged with Euroclear
  - In the field of clearing: 2003 LCH-Clearnet
  - In the field of trading: 2006 NYSE-Euronext
- What has it brought to the market?
  - Higher efficiency, lower costs
  - Lower likelihood of operational disruptions
- Risks created by integration
  - Single point of failure: less/no alternative route(s)
  - Increased systemic importance: well-functioning is crucial

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... to be continued as  
NCSD joins Euroclear



joint press release 2 June 2008



- Euroclear, NCSD [= the Finnish (APK) and Swedish (VPC) CSDs] and the owners of NCSD have signed a **'Memorandum of Understanding' whereby the shares in NCSD are to be acquired by Euroclear.**
- NCSD is expected to **merge with the Euroclear group in the fourth quarter 2008**, subject to obtaining regulatory approvals and signing the final agreement.
- The new Euroclear group will serve seven European markets and represent approximately **65% of the Eurotop 300 equity markets** and **50% of all European domestic debt outstanding** (Euroclear Bank included).
- NCSD intends to transfer its transaction-processing activities to Euroclear's **Single Platform** after it is completed (planned for 2011). All Euroclear group clients will settle trades and process corporate actions and related transactions on a single, multi-currency, multi-jurisdictional platform.
- Clients of the combined NCSD/Euroclear organisation can expect to **save more than EUR 350 million per year in back-office and operational costs**. This is half of the estimated EUR 700-800 million in annual savings achievable through CSD platform consolidation and market-practice harmonisation across Europe.

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## Other interesting areas for future work

- Outstanding questions
  - use of liquidity by securities settlements today
    - ✓ magnitude compared to other payment types?
  - why have the 2 systems not merged earlier? (after the merger of the CSDs)
  - intraday pattern of bonds and equities transactions
    - ✓ how does this pattern influence possible liquidity savings?
  - Relative value of bonds transactions vs. equities
    - ✓ Does it limit potential benefits from liquidity pooling?

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## Other interesting areas for future work (2)

- Additional areas of research
  - Risks related to settlement on one single funds account?
    - ✓ influence of concentration?
    - ✓ difference between credit and operational events?
  - Analyse liquidity-saving effects of optimisation algorithm and liquidity pooling separately
    - ✓ what is the clean effect of liquidity pooling?
  - DVP model used?
    - ✓ influence on liquidity usage of DVP model change?

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