Discussion of "The Assessment of Operational Risk in the Austrian Large Value Payment System ARTIS, by Stefan W. Schmitz, Claus Puhr, Hannes Moshammer und Martin Hausmann

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About the study

Background:

- operational incident in a participant's site, causing inability to process outgoing payments – however, its internal system's running
- no solvency problems by default
- actual data for one month, from November 2004
- 3 scenarios with variation by contingency
- collateral included in liquidity, continuity arrangements available

Research question:

- How does one day failure of critical participant(s) affect the liquidity of the system and other participants?

Main findings of the study

- scenario 1, the most active account fails + <u>stop sending</u> in 45 min – a very limited liquidity reduction of 1,19%

- scenario 2, the account with largest volume of payments fails – a liquidity reduction by 54,74%, made up of both liquidity drain and sink

- scenario 3, three most active accounts fail simultaneously – liquidity runs out by liquidity sink

- the number and value of unsettled payments in scenarios 1 and 2 without continuity pretty much the same

- the **crucial role of continuity arrangements**, stop sending and debit authorisation in protecting the system

- day by day variation, different banks in affected differently

Merits of the study

- The paper is well structured and a pleasure to read
- Scenarios are insightful and parallel runs with and without continuity arrangements are revealing
- The failure is clearly defined giving good basis for further research
- The study gives very important information of the vulnerability of a RTGS system and the crucial role of continuity arrangements – the Finnish experience from July 2006 is that continuity measures are to be started at once when the severity of the incident becomes clear (started at 16.00 in these scenarios)

Some observations

- A short description of ARTIS as well as of stop sending and debit authorisation might have been useful in the text

- The **key sentence** "given the existing business continuity arrangements would prove effective" could be even more stressed

- Impact on continuity arrangements – time criticality, staff available

- System design and rules have a strong influence in the reliability of a system, not just technical elements

For further research?

- Interesting areas for further research might be e.g.:
    - upper bound of liquidity reduction on the most lively day of the year (TARGET day, Austrian)
    - the affected participants internal system down – escalation of the situation
    - with less favorable liquidity situation (e.g. limited collateral), a shorter down time
    - changes in participants behaviour
    - what do the worst affected participants tell about the concentration of the market (nr of banks with unsettled payments)