

## Comments on “Impact of Operating an RTGS System without Intraday Overdraft Limit”

by Ali Al Homidan, SAMA

### 8<sup>th</sup> Payment and Settlement System Simulation Seminar and Workshop

27 August 2010

Junghwan Hyun,  
The Bank of Korea



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## Summary

### ◆ Some features of SARIE:

- RTGS, 24/6
- fully collateralized intraday liquidity
- only banks can participate in the system

### ◆ Simulation results: robust

- Although the intraday liquidity limit reduces to a half, no gridlock occurs
- In the extreme case where intraday liquidity is not allowed, 4% of the total payment values is delayed
  - ✓ 99.65% of delayed values is resolved by gridlock resolution for less than 30 minutes

## Questions about the Simulation

- ◆ **Is the date from the data an average day?**
  - Are patterns of settlement always similar to that of the date?
  - If we used different data, we would find different results.
- ◆ **What is the policy to make banks settle payments early?**
  - Is timing of settlement elastic to price?
  - Would the policy be enough to induce early settlements in financial crunches?
  - Would the policy still be effective if the intraday liquidity limits were reduced?
- ◆ **Which banks did cause the gridlocks?**
  - Settlement risks usually stem from concentrated payment flows through a few large participating banks
- ◆ **What are the features that could be introduced to reduce gridlock?**
  - introduce multilateral or bilateral settlement mechanisms during peak hours

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## Ideas for Further Work

- ◆ **Data span extension**
  - includes various dates in terms of payment values and volumes
- ◆ **Settlement risk analysis, estimation on the optimal liquidity**
- ◆ **Bank-level analysis with Game Theory approach**
  - dynamic (or repeated) game of incomplete information
    - ✓ banks have incentives to delay settlements, although the pricing policy exists, particularly when settlement risks occur in the system
    - ✓ incorporate banks' strategies and action spaces into simulation
    - ✓ also incorporate SAMA's response to the delay
    - ✓ The strategies may vary in financial market conditions
  - The results depend on each bank's belief of other banks, SAMA's response, degree of uncertainty, etc

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