



Modelling payment systems as a risk assessment tool:

Discussion of papers by Glaser, Haene and Merrouche, Schanz

Douglas Conover*
Member, CPSS Secretariat

*Banque de France/European Central Bank conference on
“Liquidity in interdependent transfer systems,” Paris, 9-10 June*

** These views are mine, and not those of the CPSS or the BIS*



Outline

- Why model operational risk events?
- What do we need to know?
- How do these specific papers help us?
- Can new policies reduce risks?
- Is there more to learn?



Why operational risk events matter

- Operational outages have large external costs
 - The realisation of “gross” funding liquidity risks
 - Unexpected funding or delay costs
 - Potential reputation issues
 - Potential to affect funding markets, including effective overnight interest rates
 - Interdependencies mean that risks could spread to several systems and currencies



What we need to know

- How big could the disruption be?
 - Simulations, but assumptions required
- How big would the disruption be?
 - Empirical studies of actual behaviour: assumptions verified or adjusted
- What kind of impact might we expect?
 - Breadth of disruption—how systemic?
 - Amount of central bank borrowing and associated collateral needs
 - Impact on prices?



Glaser and Haene

- How big could the disruption be?
- Looking for the largest possible effects
- Straightforward method and results
- Structure of system likely matters
- Two key assumptions:
 - reaction time
 - availability of additional liquidity
- Are the effects of system-level controls clear?



Merrouche and Schanz

- How big would the disruption be?
- Measuring reactions to real events
- Duration: how long until I make my first billion?
- Intra-outage dynamics, and time of day effects
- No “systemic” impact, but at what level of liquidity?



What can we do?

- Better business continuity planning
- System-level actions: liquidity saving mechanisms and sending limits?
- Bank-level actions: encouraging early settlement and active intraday account controls



Further research

- Can we understand the cost?
 - Unexpected borrowing, impact on prices
- How much collateral is enough?
 - Can simulations help central banks and institutions judge prudent collateral levels?
- Why do we see the reactions that we do? Is the down-shift “manual” or are there other “automatic” factors?