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Comments to "Too-connected-to-fail Institutions and Payments System's Stability" by León, Machado, Cepeda and Sarmiento

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Idea

- To assess systemic risk within Columbia's large-value payment system (CUD).
  1. By identifying too-connected-to-fail (TCTF) institutions with the concepts of the network theory.
  2. By simulating the effects of a removal of 4 main institutions to the system's resilience and to other institutions in the system.
     - Static simulations (no second-hand effects)
     - Dynamic simulations (with second-hand effects)
- Data for an "average day" estimated on the basis of real transactions.
- Three distinctive time periods
  - Boom (Feb 2006), stress (June 2006) and trading volume peak (Sept 2009)

Results (1)

- Static simulations:
  - Results in terms of the decline in traded value and number of transactions as well as concepts of network theory
  - Boom & Stress scenarios: A removal of a brokerage firm has a greater impact than that of a commercial bank.
  - Trading peak: Removal of commercial bank more hazardous

- Dynamic simulations:
  - “Affected institution” = an increase in payments on queue (PoQ); calculating different liquidity indicators
  - “Impacted institution” = the institution is unable to make payments

Results (2)

- Dynamic simulations:
  - Mutual funds and brokerage firms most affected
  - Commercial banks and financial corporations able to withstand the shock thanks to the central bank's facilities (OMO) & own liquid portfolios (TES)
  - On average, the number of affected institutions (the increase in their PoQ) larger in the boom scenario than in the stress and the trading volume scenarios.
  - Failure of
    - Brokerage firm affects financial corporations, brokerage firms and pension fund managers
    - Commercial bank affects mutual funds and pension fund managers

Comments

- Valuable work that increases the understanding of the payment system's structure.
- Shows that the institutions that are not TBTF can also matter.
- Combines the network theory and the simulation technique in a meaningful way.
- Gives insights what are the possible weak points of the system and how the system could be improved.

Concerns

- Does it really matter? What is the real cost for the central bank/society?
  - It is not clear what is the share of impacted institutions over all / affected institutions (in terms of market share, trading volumes etc.).
  - If impacted institutions (i.e. mutual funds and brokerage firms) fail, what groups in the society would be affected? Or how much would it cost to save the impacted institutions?
  - After all, could one let these institutions to go under?
- TCTF concept useful but is not without weaknesses.
- In case of the crisis, rumors can change the network and “attacked” institutions may face liquidity problems before actually being closed out from the network.

Concerns

- Are scenarios always run for the four most connected institutions (table 2), although the ranking of the most the relevant institutions seems to alter (figure 5)?
- Tracking down the results not easy owing to use of words ”impact” and ”affected”.
- Minor issues:
  - Two tables with number 6.
  - Some inconsistency with the abbreviation “FC”/”CF” (table 1 vs. text)
  - The beginning of the second paragraph on page 19 not clear.

Suggestions

- Could excessive use of OMO limits by several affected institutions somehow disturb the OMO agents and the use of the central bank's liquidity facilities exaggerating the negative impact?
- What kind of linkages the system has within Columbia/abroad? Could a shock originating outside CUD affect the system negatively and weaken its resilience?
  - And what if large-value payment system itself would fail? Impact on other systems?
- Do margin calls / possible downgrading of collaterals have an impact on the settlement of the payments?
- Behavioural modelling