Outages in Sovereign Bond Markets

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EBA Policy Workshop
November 7, 2023

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Main Result and Contribution

Main result: outages in the futures market for European sovereign bonds causes spot markets to seize up

Contribution: empirical evidence suggesting that sovereign bond futures market prices are crucial input used by spot market traders

A Lot to Like About This Paper

Clear and simple identification: outages as natural experiments

Cool data: multiple high-frequency datasets

Well-written: clean and thorough exposition

Interesting findings: clear causal connection between futures and spot market activity BUT not the other way around

Why Do These Results Matter?

- The authors write the following about their results:
  - "This paper tackles [the] question […] where and how price formation takes place"
  - "informative about how the sovereign bond market works in normal times"
  - "suggest that bond futures are vital for the euro area fixed-income market to function smoothly"
  - "can inform the recent literature on cyber risks"
  - "the European futures exchange Eurex is of systemic importance for the fixed-income market"
- An assumption behind some of these statements is that the impact of the outage had negative impacts in welfare sense. Is that true?

Who Was Harmed By the Outage?

- It is clear that volume and liquidity evaporated following outages

- If no one is trading, who is harmed?
  - People who wanted to trade but couldn't
  - People who traded anyway but got a bad price

- How big are either of the above groups?
  - This matters for welfare consequence of mispricing

Why Did Trading Stop in Spot Markets?

- Authors’ hypothesis: futures market prices are vital inputs to spot market bond traders for price discovery
- Alternative story: spot market traders simply chose to take a few hours off while the futures market was offline
- Key questions:
  - Were spot market traders unable to trade or did they chose not to?
  - How much do they overlap with futures traders?
- Suggestion: ask spot market traders

What To Do Moving Forward

- Outages appear to be sporadic and short
  - Two outages in 2020 of 4 hours and 2 hours
  - “twelve previous outages on Eurex between 2009 and 2018”
- Should we be worried?
  - No: US markets not affected → not systemic despite correlated assets
  - Yes: what if outages lasted longer than a few hours

Final Thoughts: Big Picture

- The results in the paper reveal the hidden plumbing behind the European sovereign bond market
  - They tell us *where* price formation takes place

- Unclear at this point if results also:
  - Tell us *how* price formation takes place
  - Imply systemic risk concerns

Thank You!

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