Identifying Cross-Sided Liquidity Externalities: A Tale of the Two-sided Markets

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The Cheat Sheet

Preface

- Cross-sided liquidity externality:

  "Liquidity demand begets liquidity supply, and vice versa."
  - *Foucault, Kadan and Kandel (JoF, 2012)*

Main Question

- Does the cross-sided liquidity externality à la FKK (2012) exist empirically?

Answer: Yes!

The Cheat Sheet

How They Know

- They test two predictions from FKK(2012) and show empirical existence of the cross-sided liquidity externality
- Identification strategy:
  - Δ in trading costs: Increase in taker rebates on the BX
  - Δ in monitoring costs: CART system introduced to the BX

What is the take-away?

- Trading platforms may miscalculate the effect that changes to trading/monitoring costs on market quality (and revenue!)
- A new liquidity measure: liquidity cycle length

Crib notes on FKK (2012) - Game Pieces

The Players:

- Risk-neutral makers and takers (with fixed roles), plus a trading platform

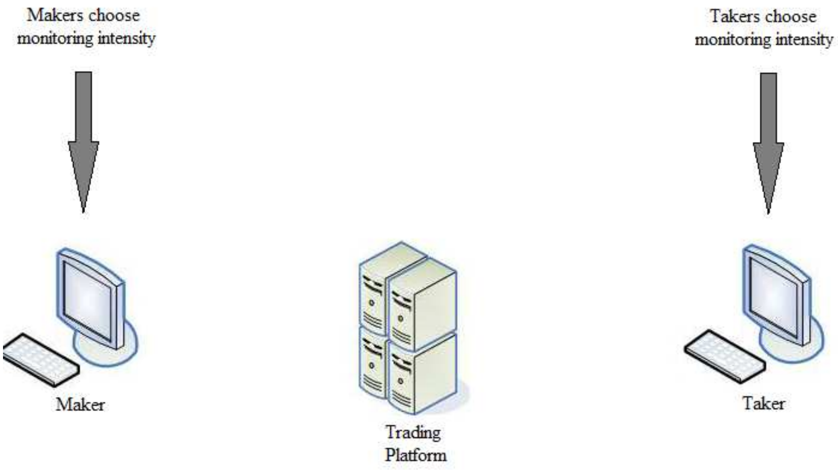
The Incentive:

- Gains from trade, $\Gamma > 0$.

The Frictions:

- Monitoring costs of makers and takers, as well as trading fees imposed by the platform.

Crib notes on FKK (2012) - Game Play



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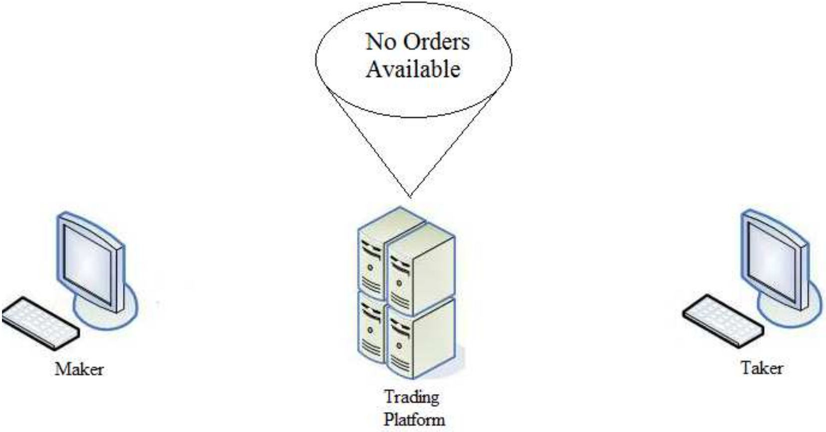

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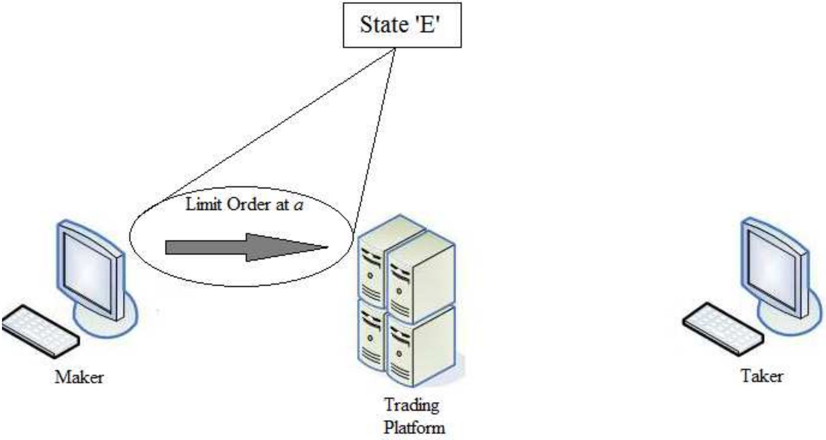

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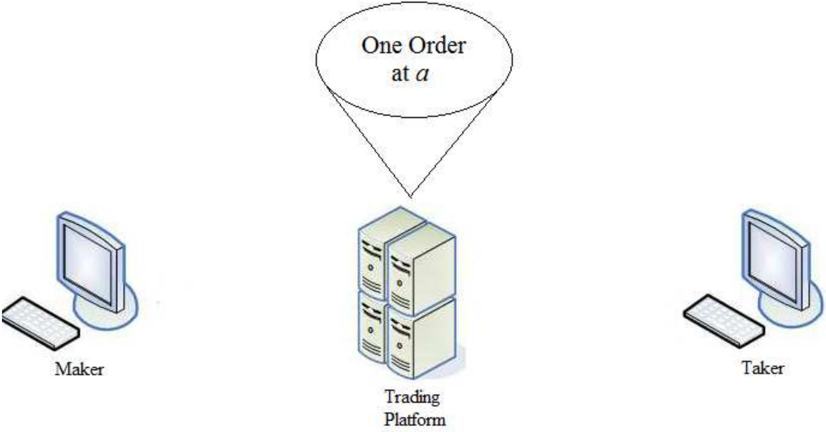

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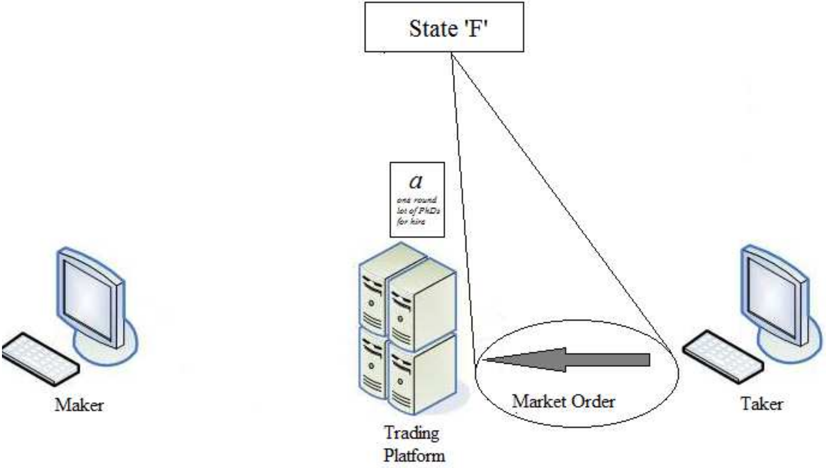

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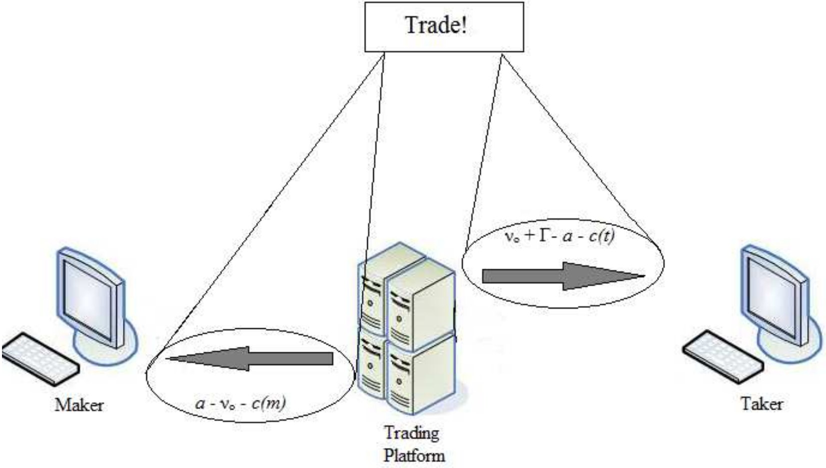

A Significant Contribution

A New Liquidity Measure

- Liquidity cycle length as a proxy for order book resilience
  - Empirical Question: How much do low-latency liquidity providers contribute to resiliency?
  - Answer: Use the SST(2012) liquidity measure!
- How you compute these cycles (in SAS, Python, etc.,) can be very useful academically and practically:
  - Consider providing some code in an online appendix or other venue so others can use the measure.

Comments

FKK(2012) and the Fee Change

- FKK(2012) assumes makers and takers are fixed in their roles
- Arguably, may not be the case in the limit order book $\rightarrow$ a taker rebate change affects the maker/taker choice.
  - Colliard and Foucault (2012)
  - Brolley and Malinova (2012)
- How does this affect the interpretation of your results? Some additional discussion on this would be useful.

Comments

Some Added Clarity

- Three key concepts could use some expansion in the introduction (to avoid some of the mystery):
  (i) Cross-sided liquidity externality
  (ii) The technology shock (introduction of CART)
  (iii) The fee change (increase in taker rebate)
- One additional sentence is needed for (i), and more detail about (ii) and (iii) would help exposition.
- Try to bring out the results together, and early.