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Discussion of

Identifying Cross-Sided Liquidity Externalities

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Summary

– The authors

- study the interaction between limit order (LO) and market order (MO) traders at the Nasdak OMX BX (formerly Boston SE – BX)
- measure the extent of the the cross-sided externality between liquidity consumption and provision
- offer an empirical proof of the rationale behind different trading fees schedules, and their effects on BX revenues
- derive a measure of liquidity in liquidity cycles

Liquidity cycles

when liquidity makers (LO traders) increase their monitoring intensity => the liquidity takers (MO traders) benefit from narrower spreads so they use more liquidity => giving rise to a fresh liquidity supply

- it is beneficial for both liquidity makers and takers to find each other
- but things can turn the other way around: in case of negative network externalities LO traders are afraid of being (adversely) selected by MO traders and so abstain from posting L0s
- the fee structure of the exchange may alter the incentives and thus the behavior of LO and MO traders
- the existence of positive or negative externalities (and their comparative extent) is an empirical matter

Results

- make and take cycles are clearly identified, the duration of make cycles is 10 times the duration of take cycles
- the intraday pattern of cycles is consistent with the ordinary U shaped intraday trading volume pattern
- cycles are shorter for larger and more liquid stocks

Results 2

- based on the duration of cycles, the authors test 2 predictions
  a. an increase in the rebate for MOs, as it incentivizes liquidity demanders (and not providers), should decrease the duration of take cycles, because of the increased monitoring intensity from LO traders: liquidity demands causes liquidity supply
  b. the reducion in monitoring costs via technological shock should decrease the duration of take cycles, because of lower monitoring costs
     - and a sub-prediction: negative externalities exist as well (the asymmetric information risk in sub-samples is positively associated with the duration of trading cycles)

Results 3

- a new measure of liquidity: resiliency measured by the duration patterns of liquidity cycles, clearly identified

Comments 1

- huge work: microseconds, aggregation, cycle calculations, rebuilding of the order flow
- small exchange, small stocks, infrequent trading (avg # trades/day 290, median 59), inactive stocks
  - to what extent can you generalize the results to major markets, what do you expect?
- uncommon (inverse) fee structure: do not pay for LOs but for MOs. Liquidity takers are encouraged to consume the liquidity available
  - is that related to the small size of the exchange? is that sustainable on a larger scale?
  - how does the inverse fee structure compare whit the 'normal' fee structure in terms of size? (i.e. the size of the fee to provide liquidity on Nasdaq is roughly 2 times the size of the fee to remove liquidity on BX: http://www.nasdaqtrader.com/Trader.aspx?id=bx_pricing)

Comments 2

- the paper postulates that network externalities explain the MO/LO choice
  - alternatively ,could you test how the fee change affected the LO/MO choice?
- if, in equilibrium,

expected cost LO strategy = expected cost MO strategy

then

a fee change has to affect both sides of the equation

maybe you can test other dependent variabiles

- the doubling of the rebate (from 1 to 2 cents per 100 shares) is quite sizable, why? given the effect on TV revenues, what is the rationale from the point of view of the tv, contrasted to a more progressive approach?

Comments 3

- the SEC rule seems to be not simple as the (stylized ?) version tested
- the rule reads like this
  - Effective November 1, 2010, BX will *increase the rebate for accessing liquidity to $0.0002 per share executed*. **In addition, BX will introduce a tiered pricing structure** for the fee to add liquidity, under which members adding a daily average of **more than 50 million shares** of liquidity during a month will be **charged $0.00025 per share** executed, while members adding a daily **average of 50 million or fewer** shares during the month will be **charged $0.0004 per share** executed
    - italics = rule tested; bold = rule (apparently) not tested
- could this affect your results?

Comments 4

- given the presence of other TVs on the same securities, does it make sense to test
  - whether the comparative **price level** plays any role in the trading venue (TV) and order selection process?
  - whether the available **volumes** on competing TVs play any role in the TV and then order selection process?

Comments 5

- the market structure emerging from the analysis is a sort of “induced dealer market”: market participants post LOs when the liquidity is scarce, and the liquidity is scarce because it pays to consume it (but, in equilibrium, it Los submission has to pay – not through the rebate but through the BAS)
  - could it be that LO traders are big capitalized firms benefiting from (induced) transitory volatility and MO traders are small, local players?
  - could this be tested?

Final Comments

- Very interesting paper, addresses a relevant issue, for scholars and for regulators and market practitioners as well (externalities when multiple strategies, markets, fee structures coexist; drivers for competition among exchanges)
- Nice contribution to the field
- Thanks!