Discussion on “Maker-Taker Fees and Informed Trading in a Low-Latency Limit Order Market” by Michael Brolley and Katya Malinova

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Summary

- The paper studies the impact of the controversial maker/taker fee system.
- It considers three models and the most interesting is the one where some investors pay only the average exchange fee, while others pay the maker-taker fees separately.
- In this setting, not only the total exchange fee matters (consistent with the previous literature), but also the split between maker/taker fees matters (new to the literature).
- Decreasing the maker fee induces more market order submissions, increases trading volume, lowers trading costs, decreases market participation, and possibly increases traders' welfare.

The Literature

- The topic is timely, debatable, and both regulators and real traders care it very much.
- Previous theoretical papers:
  - Colliard and Foucault (2012RFS): the maker/taker fees split does not matter in a model where all traders pay fees directly to the exchange, because any change in maker/taker fees is neutralized by an adjustment in the raw bid-ask spread
  - Foucault, Kadan, and Kandel (2012JF): the fee breakdown matters in the presence of a minimum tick size, which causes makers not able to fully neutralize a change.
  - This paper: the split matters because the broker does not fully pass through the fees to all investors.
- Empirical papers: Malinova and Park (2011WP),Skjeltorp, Sojli, and Tham (2012WP)

Basic Model Setup

- A trading model a la Glosten and Milgrom (1985)
- One tradable risky asset whose liquidation value follows a random walk: $V_t=\delta_t+\delta_{t-1}+\delta_{t-2}+\ldots$
- Players
  - Two types of traders
    - "Low-latency liquidity providers" – long-lived; uninformed; submit limit orders only, and directly to the exchange; pay maker/taker fees to the exchange
    - "investors" – only live one period; possibly informed of δ_t; with heterogenous valuations y_t; choose between market orders and limit orders; trade through brokers, and pay fees to the broker
  - Brokers: make zero profits; either pass through the fees to the investors (benchmark model), or charge an average fee (main model)
  - The exchange charges fees to brokers and low-latency liquidity traders

One model organization?

- Three models analyzed, which complicates the exposition.
- The interesting one is the third, which nests the first one by setting f=0.
  - Should you set the economy with f=0 as the benchmark?
  - Alternatively, analyze a model where a fraction λ of investors pay a flat fee (λ=0 vs. λ=1)
- "Low-latency liquidity providers"=market maker?Are they uninformed equipped with low-latency data?
  - Jovanovic and Menkveld (2011): high-frequency traders are "particularly well positioned to quickly do the statistics and infer a security's change in ***fundamental value*** by tracking price series that are correlated with it, e.g., the index level, same industry stocks, foreign exchange rate etc."
  - Easley, O'Hara, and Yang (2011WP); Cespa and Foucault (2012WP)

“Flat fee per trade”

- The assumption of the “flat fee per trade” is crucial in delivering the new results.
- It’s better to give more justifications on this assumption.
  - Give more evidence on empirical prevalence; now the paper only has one paragraph on page 1.
  - Theoretically, is it optimal for the brokers to set a flat fee, instead of passing taker/maker fees to the clients? (More on this shortly, related to welfare)

Welfare implications

- The paper focuses on the welfare of the investors, and ignores other participants, e.g., exchanges, brokers (zero profits assumed).
  - The exchange's objective function is to maximize total trading fee, which in turn determines f (Colliard and Foucault, 2012RFS).
- Though commonly used in limit order models, the assumption of heterogeneous private valuation y_t is too reduced in conducting a welfare analysis.
  - What is y_t?
  - If it is related to liquidity, it should be endogenous, and might have a Hirshleifer effect. Consider a standard CARA-normal framework with endowment shocks – the willingness to pay y_t will be related to the price
  - It can also well reflect diverse opinions. Is this bias good for the investors' welfare based on an objective measure?

Other comments

- The current analysis sets the total fee f=0. Examine the joint effect of the total exchange fee ftotal and the fee split fta? (robustness and combined implications)
- More/New empirical predictions:
  - The old version has some implications of the fraction μ of informed traders (e.g. Figure 6). This can generate new empirical predictions. Empirical proxy: PIN
  - The implications of cash flow volatility? Empirical proxy: cash flow vol or return vol (which is endogenously determined)
- Broad implications?
  - Price efficiency; Return volatility

Conclusion

- A very interesting paper.
- It studies empirically relevant questions and has a good set of new results.
- It might get improved, if the authors
  - better organize the presentation,
  - better justify the assumptions,
  - provide a more complete welfare analysis,
  - develop more empirical predictions .