"Lack of Anonymity and the Inference from Order Flow"

Discussion by
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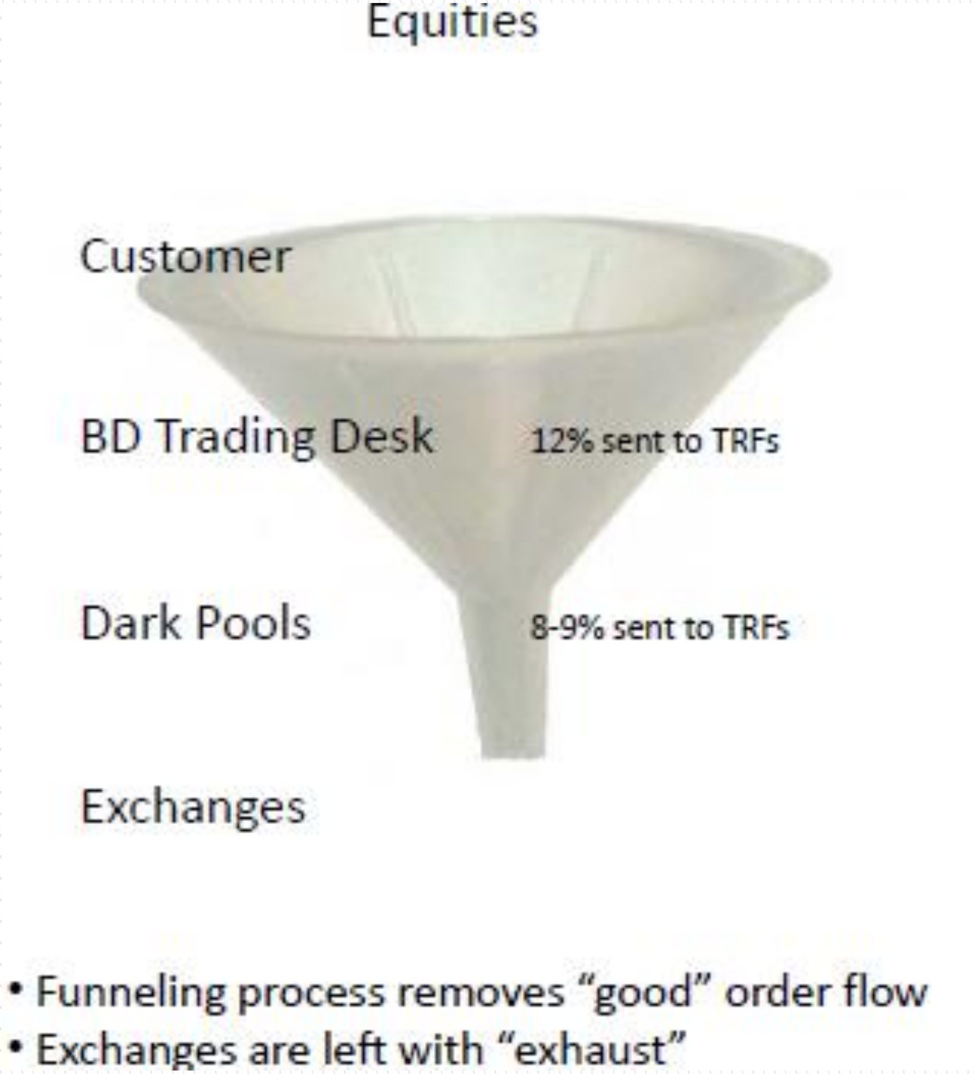
Equity order routing in the United States



Source: November 23, 2009 comment letter from the International Securities Exchange to the SEC regarding Flash orders

How does the funneling occur?

- Order Size?
    - Easley & O’Hara (1987), Chordia and Subrahmanyam (1995)
    - In the late nineties, proponents argued that a centralized limit order book coupled with decimalization would eliminate the selective execution of order flow by market participants.
    - Harris (1993), however, notes that this claim depends crucially on the assumption that order size is the only observable security characteristic related to order flow profitability in an economically significant way.

How does the funneling occur?

- **Internalizers – Customer account/trading history?**
  - "When a customer buys or sells a Big Board [NYSE] listed stock through Lehman Brothers, the order is sent to Lehman Brothers' computer, which decides whether the firm can trade the order against its own account for a profit or not."
    - "If yes, then Lehman Brothers takes the order and trades with itself…"
    - "If the computer decides it is not a profitable trade for Lehman Brothers, the customer's order is sent to the Big Board or to some other exchange."

How does the funneling occur?

- **Dealers/specialists – Broker id?**
  - Angel (1993)
  - Ready (1999)

How does the funneling occur?

- **Purchasers** identify **brokers** with profitable order flow and offer them inducements.

  - More than a trust issue. Purchasing dealers can penalize

  - Battalio, Jennings, Selway (2001)
    - Examine order flow from Knight Securities
      - Find strong evidence that order flow profitability is related to the corresponding broker.
      - Order flow from different brokers has different price impact.

How does the funneling occur?

- **Flash orders** – sifting through the leftovers.
  - From Harris (2009)
    - Exchanges use their flash facilities to provide local executions for their customers who submit marketable orders for which the exchanges cannot immediately match to orders and quotes on their order books.
    - The exchanges expose such orders to a selective set of traders who may chose to fill the orders.
      - **Traders see the broker from which the order is from.**
    - If an order is not filled within a short flash period, the exchange to which the order was submitted routes the order for execution at another exchange.

Same market participant with six MMIDs

Market Maker ID	Non Flashed Orders	Flashed Orders
PFLS	6	21,483
PFAP	128,081	29,758
PFTA	3,669	53,291
PFAM	12,634	0
PFSV	954,054	3
PFBF	197,784	226

Informed prefer anonymity…

- From Bloomberg Businessweek on May 21, 2010.
  - “Starting today, … Chi-X Europe will no longer disclose customer identification or order numbers in … its dark pool.”
  - “The move … follows a May 11 report from U.S. brokerage Themis Trading LLC titled ‘Exchanges and Data Feeds: Data Theft on Wall Street.’”
  - The value of trades on Chi-X Europe’s dark pool plunged 61% in the seven trading days after the report was released.”

Who sees what when is important!

- Fairness issues?
  - Go away with sufficient transparency and competition?

- Is a central limit order book inevitable?
  - The literature suggests the cross-subsidies between uninformed and informed order flow is too great for a central limit order book to survive in isolation.

Main findings of this paper…

- **In Finland**
  - Broker ID is correlated with the information content of order flow
    - Some brokers handle more sophisticated order flow than others
  - Order flow from brokers with more informed clientele has a higher price impact than that from brokers with less sophisticated clientele

… are consistent with prior literature

- Grinblatt and Keloharju (2000) conclude that the 6-month performance of institutions is better than that of individuals

- Comerton-Forde et al. (2005) examine Finish data and present evidence suggesting that "Other Financial Institutions" are responsible for the superior performance

- Goldstein et al. (2009) suggest U.S. institutions concentrate their volume with a few brokers.

- Based on these results, would expect the results documented in this paper to follow.

More specific questions…

What trading mechanism generated the data being analyzed?

- Paper states that HEX starts every day with a call and then moves to a continuous trading session with an electronic order book.
    - Data are generated from July 2000 through October 2001

- Comerton-Forde, O'Brien, and Westerholm (2005)
    - "Pre-arranged (upstairs trades) can occur during continuous trading but must clear the limit order book up to the pre-determined price."
    - "Anecdotal evidence suggests that a large proportion of trades occur during after market trading so the trade can be done at one price."
        - Data are generated between April 1999 and May 2000

How do we interpret the results?

- Are there both upstairs and limit order book trades in the sample?
- If so, is this a paper studying institutional trading?
  - Focus on upstairs trades.
- Can we learn something about how sophisticated traders selectively interact with the limit order book (based on broker id)?
  - Help inform the flash order debate?
  - Focus on the order book interactions.

Do we need three groups of brokers?

Investor Class	Individual Accounts % of trading activity	Nominee Accounts % of trading activity
Foreign Companies	7.00%	0.00%
Domestic Deposit Taking Banks	0.14%	10.24%
Foreign Owned Deposit Taking Banks	0.00%	9.85%
Other Financial Institutions	3.67%	33.26%
Salary Earning Households	27.96%	0.00%
Other Households	2.45%	0.00%
Resident in European Union Member State	0.19%	0.00%

INFORMED

INFORMED

Results from Comerton-Forde (2005).

Implications

- Can you stratify brokers into groups based on percentage of order flow from “Other Financial Institutions?”
- Can you stratify brokers by value proposition?

vs.

WELLS FARGO ADVISORS

Why don't informed investors randomize?

- Perhaps their order flow, while more informative than others, is not informed enough to allow others to front run.
- Perhaps the brokers servicing the uninformed charge a commission that is high enough so as to offset any gains from hiding amongst the uninformed.
- Perhaps investors use brokers for additional reasons
- Can you guys tease out more here?

Read the paper!

- The issues are fascinating.
- The results are convincing.
- The results inform current market structure discussions.