Discussion of “Trading by Crossing” by Chan, Conrad, Hu, and Wahal

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What is (internal) crossing?

- A trade where both counterparties are internal
- Allow institutions to match purchases and sales without exposing these orders to an external marketplace.
- Directly saves transaction costs as transactions take place within the firm, not on the exchange

This paper studies potential trading cost savings from internal crosses

- from the asset management firms’ perspective
- Estimated cost savings: 1.28 billion per 11 years, 116 million per year, or 8-14 bp
Main Contribution

- Studying internal crosses is interesting
  - Complete record of trading
  - Helps us understand the role of the informed/uninformed trading
  - Regulatory implications: Should internal crosses be promoted or discouraged?
  - The literature on internal crosses is scarce

- The results are economically significant
  - Transaction cost of 8-14bp can be substantial for large trades
  - Transaction cost of $5.65 billion could have been saved if internal crossing were entirely allowed.
  - Supports the economies of scale at the investment firm level (Berk and Green 2004)
Market Structure

Exposure to Market Order Flow

Internal Crosses | External Crosses | ECNs with Limit Order | Traditional Exchange

- Internal crosses: prices are not affected by order flows
- External crosses
Market Structure

Exposure to Market Order Flow

- Internal Crosses
- External Crosses
- ECNs with Limit Order
- Traditional Exchange

- Dark Pool
- LIT Market

- Dark pool: if information on orders and quotes are private
- LIT market: if orders and quotes are public in real-time
- The difference between dark pool and lit market being widely studied
Cost of Trading (e.g., Harris 2003)

Transaction Cost = Explicit Cost + Implicit Cost

- Direct cost paid to exchanges, Commissions and taxes
- Market impact cost: the cost incurred by the transaction itself by changes in prices
- Opportunity cost: the potential cost incurred when the trade is not executed

- Bid-ask Spread
- Market Impact Cost
- Opportunity Cost
1. The Alternative to Internal Crossing

This paper shows that there are transaction cost savings by internal crossing.
1. The Alternative to Internal Crossing

- This paper shows that there are transaction cost savings by internal crossing
- But... compared to what?
- Compared to LIT market
  - Internal crossings save explicit trading costs
  - Also somewhat saves implicit trading costs
  - Bid-ask spreads
  - Impact to the price
  - Possibility of failed transaction
1. The Alternative to Internal Crossings

- What would happen when internal crosses were disallowed?
- **Trade on exchange** or in **black pool** market?
- **The black pool market** (external crosses/block trading)
  - May reduce explicit transaction cost, but still small
  - Trading occurs at the bid-ask midpoint
  - No impact on the market
  - Still some possibility of failed transaction but smaller than market trades
- **A clear benchmark would be helpful**
1. The Alternative to Internal Crossings

- A second issue of using the LIT market as a benchmark
- Internal crossing less likely to be driven by information
  - Asset managers with private information are more likely to trade on exchange
  - But, information based trading is likely to have higher market impact cost
- Any implications on information based trade vs. non-information based trade
2. Measuring Implicit Trading Cost

Implicit Cost = Side \times (\text{Execution Price} - \text{Fair Market Price})

- Side = 1 for buy orders, = -1 for sell orders
  - e.g., Collins and Fabozzi (1991)
- This paper uses the beginning-of-the-day as fair market price

\[
\text{Implicit Cost} = \text{Side} \frac{P_t - P_0}{P_0}
\]

- Compares this measure for internal crossing vs market orders
2. Main Table of this Paper

<table>
<thead>
<tr>
<th></th>
<th>Buys Implicit costs</th>
<th>Sells Implicit costs</th>
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<tbody>
<tr>
<td>All stocks</td>
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<td></td>
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<tr>
<td>Internal crosses</td>
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<tr>
<td>Market trades</td>
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<td>32.63</td>
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<tr>
<td>Difference</td>
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<td>-11.01***</td>
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</table>

- Internal crosses happen at a lower price than the beginning price.
- For market trades, asset managers buy at a higher price and sell at a lower price.
  → Evidence that implicit trading cost is high.
2. Main Table of this Paper

Panel C: negative open-to-close return

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<tr>
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<td>Market trades</td>
<td>-127.87</td>
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<td>Difference</td>
<td>-24.59***</td>
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- Largely depends on the direction of the stock price movement
- Can be contaminated by certain market orders (e.g., loss cuts)
- Negative transaction cost?
- Alternative: e.g., volume weighted average of the price?
3. Identifying of Potential Crosses

- This paper also identifies potential crosses that could have happened
- Provides three reasons why they may not have happened
  1) Regulatory constraints (ERISA)
  2) Timing mismatch
  3) No infrastructure to implement internal crosses
- By asset management firm characteristics (size), execution prices?!

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3. Identifying of Potential Crosses

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<th>Sells</th>
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<tr>
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<td>Crossable</td>
<td>Non-crossable</td>
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<td>Implicit cost (in basis point)</td>
<td>13.67</td>
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<td>(0.12)</td>
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<td>Explicit cost (in basis point)</td>
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<td>Total cost (in basis point)</td>
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<td>33.61</td>
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<td>(0.12)</td>
<td>(0.07)</td>
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- This paper looks at the minimum of buy and sell orders happened at the same day
  - Would be biased if firms engage in intraday trading
  - Need further subsample analyses (such as bought high then sold low)
4. Social Welfare Implications

- Crossing induces more trading for asset managers but may reduce price discovery.

- Table 8 of the old version had some of the welfare implications. This part is what I would like to know more.

- “Trading by internal crossing has caused a reduction of price informativeness from trade by 3.1%.”
  - Where the 3.1% comes from is not clear.
  - Whether internal crossing for the economy is beneficial is not clear.
Do some subsample analysis (Crisis vs. Non-crisis period)

Trade size rather than firm size

Stock liquidity vs. Crossing (New table 8)
  - Internal crosses reduces liquidity or happens more when trading costs are high?
Extremely interesting topic but could benefit some clarifications

Be clear about the benchmark
  • Internal crossing vs. market trades
  • Internal vs. external crossing
  • External crossing vs. market trades

Social welfare implications