Is Proprietary Trading Detrimental to Retail Investors?

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Big Picture

• Retail investors increasingly responsible for own savings
• Financial literacy rates are low
• Financial advice has potential to overcome illiteracy...
• ... but advice may be biased by conflicts of interest
  • Advisors: Hackethal, Haliassos & Jappelli (2009); Karabulut (2010); Mullainathan, Noeth & Schoar (2011); Chalmers & Reuter (2011)
  • Financial Analysts: Malmendier and Shanthikumar (2007)
  • Financial Media: Reuter & Zitzewitz (2006); Gurun & Butler (2011)

• Fundamental problem faced by investors: those most in need of advice are least able to evaluate its quality
• Fundamental problem faced by researchers: difficult to identify deviations from counterfactual portfolios
Main Research Questions

• This paper uses data from a large number of German banks to test for conflict of interest between banks and their retail investors

1. Do retail investors buy the stocks their banks proprietary trading desks want to sell? (T4-12, T17-18)
   Bank Motive: Crossing trades within bank hides private information from the market and reduces price impact

2. Do the stocks that banks sell underperform? (T13, T14)
   Bank Motive: Shifting low returns from proprietary trading desk onto retail clients

If both answers are YES ➔ BANKS ARE EVIL!
Data

• From 12/2004 to 9/2009, researchers possess:
  • Proprietary quarterly holdings of 2047 banks
  • Aggregated quarterly holdings of each bank’s retail investors
    (includes direct holdings; excludes holdings through MFs)

• Self-imposed limitations:
  • Focus on 102 banks with largest proprietary stock holdings \( \Rightarrow \) 
    *do not exploit C-S variation in size of proprietary holdings*
  • Focus on common stocks, which only account for 5.6% of 
    proprietary holdings within their sample \( \Rightarrow \) *not necessarily focused on securities that banks focus on*
  • Require bank \( j \) and its retail investors to hold positive number of 
    shares of stock \( i \) in quarters \( t \) and \( t-1 \) \( \Rightarrow \) *will miss any cases where bank sells and retail holdings remain 0*
Data (cont.)

- Other real world data limitations:
  - Do not observe trade dates
    - Impossible to know if trades being crossed within bank
    - Makes it harder to interpretation fact that banks sell stocks with lower returns
  - Do not observe transaction prices
    - Impossible to know if trade prices deviate from market prices
  - No smoking guns
    - Because paper uses aggregate data on a large number of banks, impossible to link bank-specific broker incentives to investor behavior
Do Banks Sell to Their Retail Investors?

• Want to determine whether Retail 1 buys more than Retail 2 when Bank 1 sells more than Bank 2

• Estimate many variants of the following regression:

\[
\Delta_{ijt}^{\text{Retail}} = \beta_1 \Delta_{ijt}^{\text{Bank}} + \beta_2 \left[ I_{\Delta_{ijt}^{\text{Bank}} < k} \right] + \beta_3 \left[ \Delta_{ijt}^{\text{Bank}} \times I_{\Delta_{ijt}^{\text{Bank}} < k} \right] + \gamma_j + \alpha_t + \epsilon_{ijt}
\]

• T5: Fact that \( \Delta_{ijt}^{\text{Retail}} \geq 0 \) when \( \Delta_{ijt}^{\text{Bank}} > 0 \) and \( \Delta_{ijt}^{\text{Bank}} < 0 \) helps rule out alternative explanation that institutions systematically take other side of retail trades

• Authors interpret \( \beta_3 < 0 \) as evidence that retail investors buy what bank wants to sells
Do Banks Sell to Their Retail Investors?

- Total effect of $\Delta^{\text{Bank}}$ depends on $\beta_1$, $\beta_2$, and $\beta_3$
- Because $\beta_2$ falls as $k$ falls, total effect is relatively flat $\Rightarrow$ retail sell slightly less when bank sells a lot more

<table>
<thead>
<tr>
<th>$k$</th>
<th>0%</th>
<th>-25%</th>
<th>-50%</th>
<th>-60%</th>
<th>-70%</th>
<th>-80%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\beta_1$</td>
<td>0.001</td>
<td>0.004</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
<td>0.006</td>
</tr>
<tr>
<td>$\beta_2$</td>
<td>-0.108</td>
<td>-0.147</td>
<td>-0.193</td>
<td>-0.233</td>
<td>-0.308</td>
<td>-0.316</td>
</tr>
<tr>
<td>$\beta_3$</td>
<td>-0.050</td>
<td>-0.134</td>
<td>-0.199</td>
<td>-0.242</td>
<td>-0.321</td>
<td>-0.332</td>
</tr>
<tr>
<td>Interaction @ $k$</td>
<td>0.000</td>
<td>0.034</td>
<td>0.100</td>
<td>0.145</td>
<td>0.225</td>
<td>0.266</td>
</tr>
<tr>
<td>Total Effect @ $k$</td>
<td>-0.108</td>
<td>-0.114</td>
<td>-0.096</td>
<td>-0.091</td>
<td>-0.087</td>
<td>-0.055</td>
</tr>
</tbody>
</table>

- Would benefit from better benchmark for retail trading:
  - Control for level of retail trading at other banks
  - Better yet, add stock-by-quarter FEs
Do Banks Sell to Their Retail Investors?

Other ways to study motive and mechanism:

- Do retail buy more of what banks sell when expected trading costs are higher? *Interact* $\Delta^{\text{Bank}}$ *with stock-level proxy for trading costs*

- Split sample. Find $\beta_3$ is more negative when bank has “asset management”. *However, statistical evidence is weak. Better to look at holdings of affiliated mutual funds?*
Are Retail Investors Harmed?

- **T13 & T14:** The stocks that banks sell underperform other stocks **during** the quarter that they are sold.

- Authors’ interpretation that banks sell “losers” requires banks to forecast abnormally low returns.
  - *Do they have banking relationships with these firms?*
  - *Do they also engage in short selling?*

- **Alternative:** Banks sell after underperformance for window dressing reasons.

- Lacking data on when trades occur within the quarter, authors should test for underperformance in **quarter after** retail investors buy.
Net Cost to Retail Investors?

- **T15:** Should retail investors care if their bank has proprietary stock holdings?
  - Interesting attempt to measure net impact of proprietary-holding-driven-conflicts-of-interest on retail investor stock returns
  - Find retail investors earn lower abnormal returns on stock holdings at 63% of banks with proprietary stock holdings
  - *What fraction of retail holdings are stocks? What is difference in total portfolio returns (stocks plus bonds plus mutual funds)?*
  - *How do investors sort into banks? Do more literate investors choose banks without proprietary trading desks?*
  - *Are there any offsetting benefits to using banks with proprietary holdings? Do they steal less from you in other ways?*
Variation in Strength of Conflict?

- **T16:** Should retail investors care if their bank has a relatively unprofitable proprietary trading desk?
  
  - **Hypothesis:** Shifting low returns onto retail clients is more attractive when proprietary trading profits are lower.
  
  - Split sample and find $\beta_3$ is more negative when trading desk has below average profits.
  
  - *Interesting result, especially since overall profitability of proprietary trading is unlikely to be driven by stock holdings.*
  
  - *Unclear whether banks being reclassified each quarter (or year) based on changes in profitability. This would be my preference.*
  
  - *Unclear whether coefficients in the split samples are statistically distinguishable.*
Conclusion

• Terrific, timely research question

• Authors deserve credit for approaching the question from several angles

• Evidence is broadly consistent with the author’s understated conclusion that:

  “banks breach their fiduciary duty and exploit their private customers by pushing them ‘loser’ stocks which they intend to dump from their own portfolios”

• However, more can be done to strengthen evidence that retail investors buy what banks sell, and that banks sell stocks that are about to underperform