Understanding Retail Investors: Evidence from China
by Charles M Jones, Donghui Shi, Xiaoyan Zhang & Xinran Zhang (JSZZ)

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JSZZ (this paper) modeled after BJZZ

- JSZZ attempts to replicate Boehmer, Jones, Zhang, & Zhang *forthcoming JF* (BJZZ)
  - Chinese retail investors
  - Partition by account size and include institutions
  - All trades (not subset of marketable orders)
- BJZZ main results don’t replicate
  - In BJZZ retail order imbalance positively predicts returns
  - In JSZZ retail order imbalance (OibRT1-4) negatively predicts returns
- BJZZ run 2-stage regression to try to understand how it is that retail trades positively predict returns
  - Persistence, i.e., positive serial correlation in orderflow
  - Contrarian trade benefit from supplying liquidity to institutional investors
  - Other, e.g., informed trades
- 2-stage regression is an awkward fit for explaining money losing trades
  - For example, JSZZ write that order persistence “contribute to the negative predictive power of smaller retail investors”
  - But the direction is wrong, order persistence should positively predict returns
2-stage decomposition of OIB’s predictive power

- **Persistence**: (Chordia Subrahmanyam, 2004)
  - Stage 1) OIB(t-2) & OIB(t-1): POS correlation—correct sign
  - Stage 2) OIB(t-1) & Ret(t): NEG correlation—wrong sign

- **Liquidity provision** (Kaniel, Saar, Titman 2008; Barrot, Kaniel, Sraer 2016)
  - Stage 1) Ret(t-2) & OIB(t-1): POS correlation—wrong sign
  - Stage 2) OIB(t-1) & Ret(t): NEG correlation—wrong sign

- **Liquidity demand** (Consistent with attention theory in Barber & Odean 2008)
  - Stage 1) Ret(t-2) & OIB(t-1): POS correlation—right sign
  - Stage 2) OIB(t-1) & Ret(t): NEG correlation—right sign

- Overconfidence? Gambling? Other?
Does turnover proxy for overconfidence?

- “For the overconfidence behavioral bias, we follow Barber et al. (2008) and Liu et al. (2021) and proxy it with turnover”

- NO! Overconfident traders have higher portfolio turnover

- But time varying investor overconfidence about specific stocks is not the cause of cross-sectional differences in stock level turnover

- Turnover is a better proxy for attention (or for rising prices which—of course—don’t need a proxy)
Do large price moves proxy for gambling?

• Large price moves could attract gamblers but they could also affect retail trading in other ways.

• Coseman & Frehen (2021) look at stocks with big gains & big losses in previous month and don't mention gambling once in their paper.

• Barber & Odean (2008) treat large price moves a proxy for attention.
Some history

- Persistence in cross-sectional order imbalance
  - Chordia and Subrahmayam (2004) all market orders (ISSM & TAQ) \textit{daily}
  - Barber, Odean, Zhu (2009) US retail brokerage trades--\textit{monthly}
  - Barber, Odean, Zhu (2006), Hvidkjaer (2006) retail market orders (ISSM & TAQ) \textit{weekly, monthly}
  - BJZZ (TAQ data post 2007) \textit{weekly}

- Contrarian individuals provide liquidity to institutions
  - Kaniel, Saar, Titman (2008) NYSE Consolidated Equity Audit Trail data \textit{monthly}
  - Barrot, Kaniel, Sraer (2016) (French retail brokerage trades) \textit{daily, weekly}
  - BJZZ (TAQ data post 2007) \textit{weekly}

- Individual investors \textit{may} be informed
  - Kelley Tetlock (2013) (US wholesale market maker data) \textit{daily, weekly}
  - BJZZ (TAQ data post 2007) \textit{weekly}
    - “we find that retail investors are informed at horizons up to 12 weeks…. [retail] investors are quite well-informed as a group.” (2017 draft of paper)
    - “consistent with the hypothesis that the marketable retail order flow contains valuable information about future returns.” (forthcoming paper)
Predictive but not Profitable (Barber, Lin, Odean 2021)

Long top OIB quintile / short bottom quintile
Retail trades are predictive but not profitable (Barber, Lin, Odean 2021)

Long top OIB quintile / short bottom quintile

Retail Order Imbalance Long-Short Strategies

Long-short Buy-Sell Retail returns by Trade Size

- Abnormal Return (bps)
- Event Day
- Trade Weighted
- Equal Weighted

- Basis Points
- Trade Size Bin
- One-Day Holding Period
- Five-Day Holding Period
Why do individual investors lose through trading?

- Asymmetric information
  - Overconfidence—individuals trade with better informed investors because they think that they know more than they do
  - Entertainment and/or gambling—individual investors trade with better informed investors because it is entertaining to trade

- Transaction costs
  - In some markets investors pay high commissions, spreads, and other trading costs

- Mispricings of their own creation
  - Investors drive up prices and buy too much at the top
  - E.g., Robinhood (Barber, Huang, Odean, Schwartz forthcoming JF)
Individual Investors are Heterogeneous

- Less wealthy, less educated, less experienced investors earn lower returns
  - This paper and others
- Investors who trade more actively earn lower returns
  - RT1-RT4 daily turnover of 3.4% and negative short-term returns (based on Table 1 Panel A)
  - RT5 daily turnover of 2.1%; Inst daily turnover 0.8%; and positive short-term returns
  - RT5: 0.4% of all retail accounts; more than 10M CYN. Not who we think of as retail investors.
    - (This and other papers)
- Order type (market or marketable vs limit)
- Across countries individual investors differ in:
  - How actively they trade AND fraction of all trading
    - Low: Finland
    - Moderate: US
      - High: China, Taiwan, India, Korea
  - Their fraction of all trading
  - Trading costs