Understanding Retail Investors: Evidence from China

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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

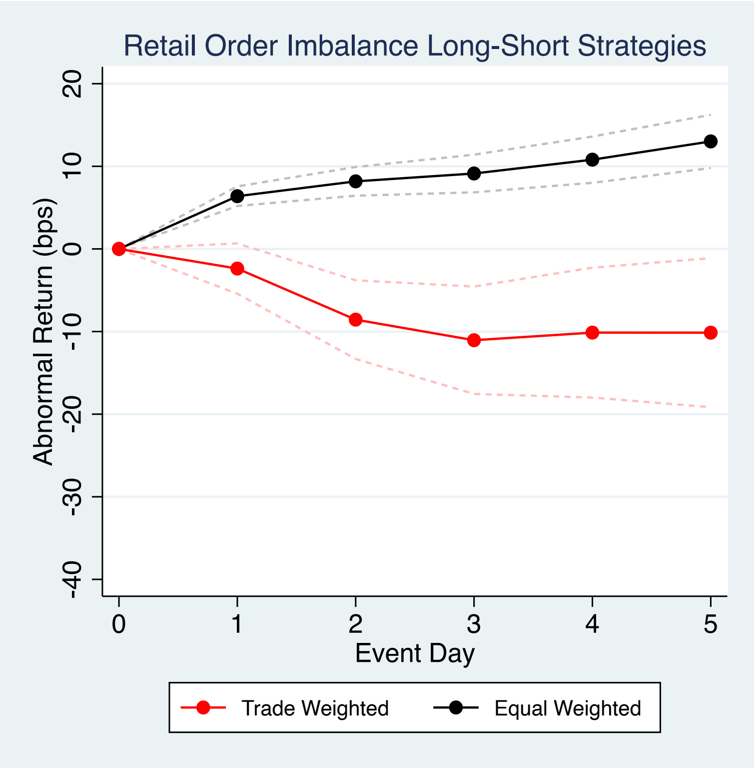
- Persistence in cross-sectional order imbalance
  - Chordia and Subrahmayam (2004) all market orders (ISSM & TAQ) *daily*
  - Barber, Odean, Zhu (2009) US retail brokerage trades--*monthly*
  - Barber, Odean, Zhu (2006), Hvidkjaer (2006) retail market orders (ISSM & TAQ) *weekly, monthly*
  - BJZZ (TAQ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

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

- Individual investors *may* be informed
  - Kelley Tetlock (2013) (US wholesale market maker data) *daily, weekly*
  - BJZZ (TAQ data post 2007) *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)

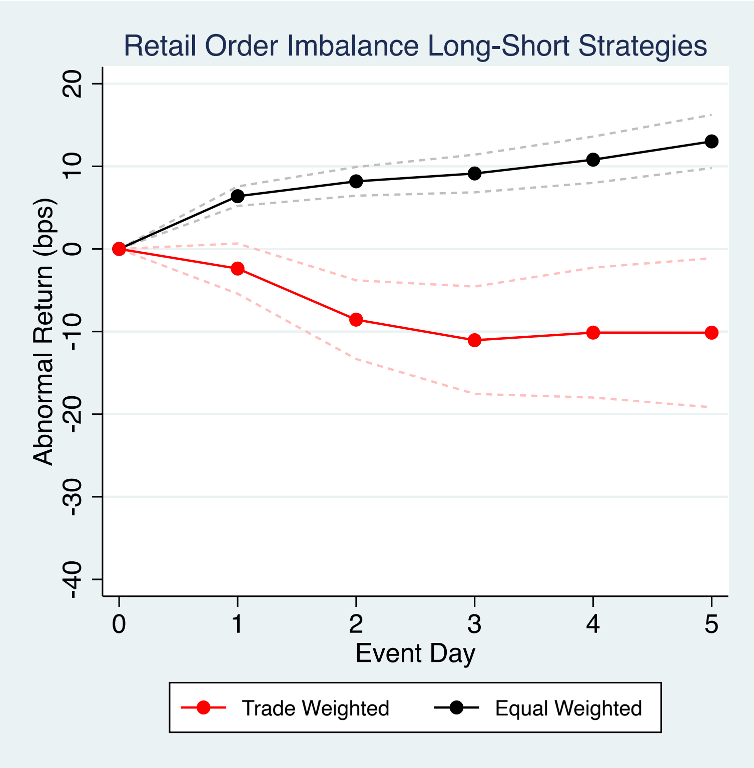
Predictive but **not** Profitable (Barber, Lin, Odean 2021)

Long top OIB quintile / short bottom quintile

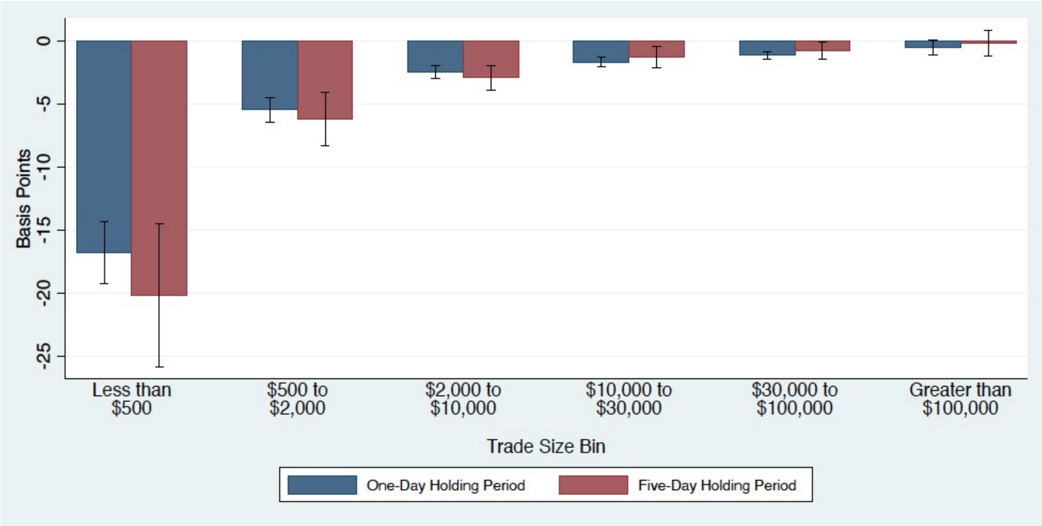


Retail trades are predictive but not profitable
(Barber, Lin, Odean 2021)

Long top OIB quintile / short bottom quintile



Long-short Buy-Sell Retail returns by Trade Size



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