Discussion:

What Drives Trading in Financial Markets? A Big Data Perspective

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AFA paper session "Asset Pricing: Machine Learning"
Jan. 5, 2025, San Francisco

Motivation

"What drives trading in financial markets?"

Very important for asset pricing research:

1. how information is incorporated into asset prices?
2. how non-fundamental trading affects prices?
3. where does non-fundamental trading come from?

...

Choice of empirical strategy (and criteria for claiming empirical success) depend on the research goal

Lots of potential here!

What to explain? (y)

- Ideal goal: "what drives trading?"

  buy/sell(investor, stock, time)

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  - some aggregation can be necessary (depending on the research goal)

What to explain? (y)

This paper:

volume(investor_group, stock, day)

1. this paper categorizes investors to five groups

- "$R^2 = 29\%$" for the *group's* volume
- R^2 mechanically depends on the degree of aggregation

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1. this paper categorizes investors to five groups
   - "$R^2 = 29\%$" for the *group's* volume
   - R^2 mechanically depends on the degree of aggregation
2. buy/sell is lumped together as volume

"Trading Volume Alpha"

Ruslan Goyenko, Bryan Kelly, Tobias Moskowitz, Yinan Su, Chao Zhang

Main message:

- daily stock-level trading volume is highly predictable with ML
- volume predictability has significant economic value:

  transfer learning: from volume forecast to portfolio implementation

"Trading Volume Alpha"

Ruslan Goyenko, Bryan Kelly, Tobias Moskowitz, Yinan Su, Chao Zhang

Simple findings that are relevant to this research:

- log dollar volume (stock-day) is highly persistent

  lagged moving average: $R^2 \approx 90\%$

  ...report R^2 relative to change in log dollar volume

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- some simple calendar dates strongly predict volume
  index rebalancing, triple witching, holidays

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- some simple calendar dates strongly predict volume
  index rebalancing, triple witching, holidays
- earnings announcement days are highly predictive
  (...not surprising)

“Quantity, Risk, and Return”

Yu An, Yinan Su, and Chen Wang

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- expected stock return explained by
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- rationale:
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  they demand higher factor premiums
- empirical results highlight:
  predicts monthly stock returns, OOS $R^2 \approx 1\%$,
  comparable to ML return forecasts

“Quantity, Risk, and Return”

Yu An, Yinan Su, and Chen Wang

Points that are relevant to this research:

- Non-fundamental flow matters to asset prices
  - need to explain “volume” with direction (buy vs. sell between investor groups)
  - need to focus on flow aggregated along the directions of risk (concentrated trading on characteristic)

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  - need to focus on flow aggregated along the directions of risk
    (concentrated trading on characteristic)
- cross-sectional APT still holds
  - who resolves mis-pricing?
    (sophisticated investors...who exactly?)
  - how do they do it?
    can we observe arbitrage taking place?

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