

# Discussion of “ETFs, Anomalies, and Market Efficiency” by Filippou, He, Li, and Zhou

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# Why do we care?

- ETFs are one of the most important financial innovations of the last 30 years
  - ETFs represent 12.6% of equity assets in the U.S.<sup>1</sup>
  - U.S. ETF trading volume as a fraction of total U.S. equity volume almost 40% over 2023 Q1 (around 32% average over 2022)
- Mostly regarded as beneficial for investors, but evidence of increased correlation and transitory volatility in underlying securities (Da and Shive, 2018; Ben-David, Franzoni, and Moussawi, 2018)
- How do ETFs interact with asset pricing anomalies?

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<sup>1</sup><https://www.ishares.com/us/insights/global-etf-facts>

# Main findings

- Construct anomaly portfolios using low or high ETF ownership stocks (within each anomaly leg)
  - Average return difference between low (high) and high (low) ETF ownership stocks is statistically greater than zero for 26 (0) anomalies out of 205, adjusting for multiple testing
- Aggregating information across anomalies: 1.03% (2.85%) monthly return among high (low) ETF ownership stocks
- Provide evidence that ETFs help incorporate information into prices (earnings announcements and price delay)

# Main challenge: limits to arbitrage or something special about ETFs?

- High ETF ownership stocks have higher market cap, turnover, analyst coverage, liquidity, and have lower idiosyncratic risk
- Are ETFs “special” or associated with lower limits to arbitrage?
  - Idiosyncratic risk, transaction costs, shorting costs, information costs, . . .
  - “ETF ownership cannot be viewed as another proxy of arbitrage costs”
  - Important from the point of view of the contribution
    - This paper: ETFs facilitate factor investing and hedging  
⇒ reduced anomaly return

# Limits to arbitrage or something special about ETFs?

The paper does an excellent job dealing with this concern:

- Match stocks based on size and turnover
  - Still  $\approx 1\%$  difference in aggregate anomaly alpha (statistical test for difference?)
  - But difficult to satisfy everyone (analyst coverage)
- Two suggestions to improve further:
  - 1 Exclude hard to borrow stocks
    - ETFs may ease short-selling constraints (more supply, lower recall risk, . . .)
    - Lowest decile portfolio seems special (-0.23% mean return vs 0.70% for P2)
    - “Short-sale costs eliminate the abnormal returns on asset pricing anomaly portfolios” (Muravyev, Pearson, and Pollet, 2023)
  - 2 Use residual ETF ownership relative to size, turnover, liquidity, . . .

# Economic mechanism

Why is ETF ownership special? “Facilitate factor investing and hedging”

- Supporting research:
  - [Huang, O'Hara, and Zhong \(2021\)](#): industry ETFs facilitate hedging
  - [Li and Zhu \(2022\)](#): ETF can help bypass short-sale constraints
  - [Ernst \(2020\)](#): investors with stock-specific information can find it optimal to use ETFs to trade on their information
  - this paper provides consistent “aggregate” evidence
- (ETF ownership is “special” for trading volume around the close ([Bogouslavsky and Muravyev, 2023](#)))

## Economic mechanism (2)

It would be great to tighten the link with theory: Which theories should we focus on?

- An increase in passive investing can be associated with an increase in price informativeness ([Malikov, 2023](#))
- ⇒ Distinguish between ETF ownership and *passive mutual funds ownership*
- ⇒ Rule out theories that single out “passive investors”
- Can then focus on theories specific to ETFs ([Malamud, 2015](#))

## Additional suggestions

- Link the rise in ETF ownership to a decline in anomaly profitability over time
- In the tests, it might be more convincing to use residual ETF ownership rather than residual institutional ownership
  - Currently, a common component will be picked up by the ETF coefficient



# Final thoughts

I highly recommend reading this paper

- Interesting and robust findings
- Reconciliation with [Ben-David et al. \(2018\)](#)?