Discussion of Zhang (2024)

"Do Mutual Funds Perform Worse When They Get Larger?
 Anticipated Flow versus Unanticipated Flow"

Discussant: Sangmin Simon Oh (Columbia Business School)

FMA 2024

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B. Industry-level Decreasing Returns to Scale

- "As the size of the active fund industry increases, the ability of any given fund to outperform declines" (Pastor and Stambaugh, 2012)
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Like other industries with decreasing returns to scale, active management has:

- Difficulty in maintaining quality and consistency (like restaurants)
- Complexity of coordinating logistics and teams (like construction)
- Diminishing yields after a certain scale (like farming)

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C. Firm-level Increasing Returns to Scale (Chen, Hong, Huang, and Kubik, 2004)

- "Funds managed in larger firms outperform funds managed in smaller firms."
    - Centralized resources and risk management at scale
    - Talent development and aggregation
    - Access to cheaper capital
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Like other industries with increasing returns to scale, active management has:

- Ability to spread the fixed costs in data and research (like software)
- Operational efficiency through centralized systems (like Amazon)
- Brand and reputation advantages (like Louis Vuitton)

Interesting question, especially in the advent of new technological developments!

Recap

Objective

- Explore relationship between fund size and performance and contributing factors

Approach

- Use flow induced by changes in Morningstar ratings as a shock to fund size
- Distinguish heterogeneity in size-performance relationship based on manager experience

Result

- Evidence of decreasing returns to scale for mutual funds.
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Tackles an important question with a cool methodology and interesting mechanism

- Nature of returns to scale in the investments industry is a promising topic!

Plan for Discussion

1. Relation to Reuter and Zitzewitz (2021)
2. Why study anticipated vs. unanticipated flows?
3. Empirical test of the "preparation hypothesis"

Point 1. Relation to Reuter and Zitzewitz (2021)

Reuter and Zitzewitz (RF 2021): No Evidence of DRS

How Much Does Size Erode Mutual Fund Performance? A Regression Discontinuity Approach*

Jonathan Reuter[1] and Eric Zitzewitz[2]

[1]Boston College and NBER and [2]Dartmouth College, CESifo and NBER

Abstract

The level of diseconomies of scale in asset management has important implications for tests of manager skill and the expected level of performance persistence. To identify the causal impact of fund size on future returns, we exploit the fact that small differences in returns can cause discrete changes in Morningstar ratings that, in turn, generate discrete differences in fund size. Using our regression discontinuity approach, we find that ratings significantly increase fund size, but that fund size has a negligible effect on fund returns. Within Berk and Green's (2004) model, the absence of meaningful fund-level diseconomies of scale implies that the lack of performance persistence arises from a lack of fund manager skill. Alternatively, the lack of performance persistence may arise from competitive pressures outside of their model.

Reconciliation re: Reuter and Zitzewitz (RF 2021)

- **Interpretation 1**: Increased competition within the mutual fund industry might have intensified diseconomies of scale in recent years.
  - Zhang (2024): Sample from January 1993 to September 2022
  - Reuter and Zitzewitz (2021): December 1996 to August 2009

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- **Interpretation 2**: "Bubble"
  - Zhang (2024): Flow discontinuity that arises when a fund reaches 36 months of age.
    - → Source of variation: No rating vs. five-star rating
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- **Suggestion 1**: Who are these funds in the sample?
  - Study whether the sample contains a disproportionately high number of thematic or sector-specific funds that are more likely to experience bubbles.
  - Comparison of sector or investment style distribution would be useful

Point 2. Why study anticipated vs. unanticipated flows?

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Suggestion 2: Provide more evidence of heterogeneity in response after Section 3

- In the cross-section of mutual funds, which fund characteristics best explain the heterogeneity in the performance degradation?

Point 3. Empirical Test of the "Preparation Hypothesis"

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- **Challenge 2**. Measuring "new ideas"
  - **Solution**: Compute a measure of "holding similarity", which measures the "extent of new investments made in the quarter"

$$Similarity_{i,t} = \frac{\mathbf{w_{i,t}} \cdot \mathbf{w_{i,t-1}}}{\|\mathbf{w_{i,t}}\| \|\mathbf{w_{i,t-1}}\|} = \frac{\sum_{j=1}^{n} w_{i,j,t} * w_{i,j,t-1}}{\sqrt{\sum_{j=1}^{n} w_{i,j,t}^2} * \sqrt{\sum_{j=1}^{n} w_{i,j,t-1}^2}}$$

  - Lower holding similarity = Greater proportion of new investments
  - I think looking at holdings is the right approach in the absence of other information.

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- **Suggestion 3a**. Provide similar evidence based on other metrics, especially because the similarity metric is likely to be very persistent
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  - Portfolio turnover
  - Similarity in the risk space (i.e. project each asset into the factor space to express the portfolio in the factor space; then compute similarity)

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- **Suggestion 3b**. Heterogeneity by fund style
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- **Suggestion 3c**. Elaborate on the economics of "preparing ideas in advance."
    - Q1: Risk of ideas becoming outdated or misaligned with market conditions
    - Q2: What happens if the prepared ideas aren't necessary because the flows were incorrectly anticipated?
        "mutual fund managers have a variety of responsibilities beyond generating investment idea…"

Final Thoughts

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    - When do investment managers significantly deviate from their previous holdings?

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- **Some questions prompted by the paper for the future:**
  - When do investment managers significantly deviate from their previous holdings?

  - How do fund managers allocate time and does this trade-off have unintended consequences for the fund's long-term performance?
    - Two recent developments that create more time for managers:
    - 1) introduction of general artificial intelligence, 2) the rise of pod shops

Thank you!