Financial Intermediaries vs. Capital Allocation: The Forgotten Role of Mutual Funds

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May 25, 2022

ABFER 2023

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Overview

- This paper empirically shows that mutual funds can help to improve the allocation of capital in the financial market
- Mutual funds show a positive investment elasticity, indicating allocational efficiency in capital flows
- The efficiency of mutual funds may reflect fund managers' skills in active portfolio management
- The *information channel* is a key mechanism through which fund managers are able to improve the allocation of capital

My take and discussion

- My take:
  - Interesting and important question
  - Well written paper
  - Robust empirics

- My discussion:
  - Contribution
  - Suggestions

Contribution

- Research questions on asset management and investment
  - to examine the impact of delegated portfolio decisions on asset prices.
  - to examine examine the profitability of professional managers.

- The contribution of the paper?
  - can add the third sub-question above the previous question.
  - "to examine **whether and how the delegated portfolio decision improve the capital allocation in the financial market**"

Empirical Specification

Equation (3)

$$I_{MF,m,i,t} = \eta_{MF} \times VAG_{i,t} + C \times \mathbf{X}_{i,t} + \epsilon_{m,i,t}$$

for mutual fund m, industry i, and year t.

- $I_{MF,m,i,t}$: industry investment made by mutual fund m
- $VAG_{i,t}$: Value added growth of industry i in year t
- $\mathbf{X}_{i,t}$: a list of fund and industry characteristics (Size, turnover ratio, expense ratio, fund age, Tobin's Q, capital expenditure, dividend rate, operating income, and cash flows)

Equation (4)

$$I_{MF,m,i,t} - I_{Real,i,t} = \eta_{MF-Real} \times VAG_{i,t} + C \times \mathbf{X}_{i,t} + \beta_0$$

- $I_{Real,i,t}$: fixed capital investment

Definitions for real economic values by U.S. Bureau of Economic Analysis

Value added

The gross output of an industry or a sector less its intermediate inputs; the contribution of an industry or sector to gross domestic product (GDP). Value added by industry can also be measured as the sum of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus.

Fixed asset

Produced assets that are used repeatedly, or continuously, in processes of production for an extended period of time. They consist of equipment, structures (including, by convention, owner-occupied housing) and intellectual property products, but exclude consumer durables.

Table 2: Capital Allocation Efficiency of Mutual Fund

	(1) Total	(2) Manager	(3) Investor	(4) Total	(5) Manager	(6) Investor	(7) Real
VAG, t	0.344***	0.329***	0.013***	0.293***	0.299***	-0.008***	0.082***
	(0.020)	(0.019)	(0.003)	(0.020)	(0.020)	(0.003)	(0.012)
Log(TNA), t	-0.001	-0.006***	0.005**	-0.002	-0.007***	0.005**	
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	
Fund Turnover, t	-0.317	0.690***	-1.243***	-0.328	0.683***	-1.247***	
	(0.462)	(0.200)	(0.375)	(0.464)	(0.200)	(0.376)	
Fund Expense Ratio, t	-4.782***	-1.829***	-2.281**	-4.774***	-1.824***	-2.277**	
	(1.393)	(0.556)	(1.047)	(1.391)	(0.555)	(1.047)	
Fund Age, t	-0.517***	-0.028	-0.478***	-0.518***	-0.029	-0.478***	
	(0.110)	(0.042)	(0.087)	(0.111)	(0.042)	(0.087)	
Capital Expenditure, t	1.213***	1.565***	-0.354***	1.678***	1.839***	-0.165**	-0.722**
	(0.342)	(0.335)	(0.066)	(0.337)	(0.330)	(0.065)	(0.355)
Cash Dividend, t	-0.025	0.005	-0.027***	-0.001	0.019	-0.018***	-0.085**
	(0.029)	(0.028)	(0.005)	(0.028)	(0.028)	(0.005)	(0.039)
Operating Income, t	0.009	-0.014	0.019***	-0.015	-0.028	0.010**	0.075**
	(0.028)	(0.028)	(0.005)	(0.028)	(0.028)	(0.005)	(0.035)
Cash Flow, t	-0.048	2.554	-2.283***	2.722	4.187	-1.156**	-8.215**
	(2.879)	(2.857)	(0.467)	(2.873)	(2.854)	(0.463)	(3.739)

Table 3: Compare Capital Allocation Efficiency of Mutual Fund and Real Investment

	(1) Total minus Real	(2) Manager minus Real	(3) Investor minus Real	(4) Total minus Real	(5) Manager minus Real	(6) Investor minus Real
VAG, t	0.268***	0.253***	-0.063***	0.226***	0.232***	-0.075***
	(0.020)	(0.019)	(0.003)	(0.020)	(0.020)	(0.003)
Log(TNA), t	-0.002	-0.007***	0.005*	-0.002	-0.007***	0.005*
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
Fund Turnover, t	-0.323	0.684***	-1.248***	-0.332	0.680***	-1.251***
	(0.463)	(0.200)	(0.376)	(0.464)	(0.200)	(0.377)
Fund Expense Ratio, t	-4.765***	-1.811***	-2.263**	-4.757***	-1.808***	-2.261**
	(1.392)	(0.556)	(1.046)	(1.391)	(0.555)	(1.046)
Fund Age, t	-0.515***	-0.026	-0.476***	-0.515***	-0.027	-0.476***
	(0.111)	(0.042)	(0.087)	(0.111)	(0.042)	(0.087)
Capital Expenditure, t	1.847***	2.198***	0.279***	2.234***	2.395***	0.392***
	(0.342)	(0.335)	(0.066)	(0.337)	(0.330)	(0.065)
Cash Dividend, t	0.020	0.051*	0.018***	0.040	0.061**	0.024***
	(0.029)	(0.028)	(0.005)	(0.028)	(0.028)	(0.005)
Operating Income, t	-0.031	-0.053*	-0.020***	-0.050*	-0.063**	-0.026***
	(0.028)	(0.028)	(0.005)	(0.028)	(0.028)	(0.005)
Cash Flow, t	4.509	7.110**	2.274***	6.819**	8.285***	2.941***

Suggestion 1

- "In economic terms, our results indicate that every 1% increase in value-added growth attracts 0.344% more capital flows from mutual funds."
  - Causal relation?
- Given the positive coefficient estimates on Capex, capital flows from mutual funds may be related to specific types of investment

- Suggestion: investigate which industry can be greater benefited from capital inflows from mutual funds or which industry shows the more improved capital allocation

Additional comments/suggestions?

- weighted least square (WLS) $\rightarrow$ ordinary least squares (OLS)
  - need to look at the average elasticity across funds
  - the independent variable (investments by mutual funds) already reflects managers' bets

- Standard Errors. cluster at the fund $\rightarrow$ Double-clustering with at the fund and the time

- Consider lagged control variables

- Past fund returns as controls for main tables?
  - could address the investors' negative elasticity?

- Is allocational efficiency by mutual funds persistent?
  - If so, consistent with fund mangers' skill

Other minor comments

- typos: Berk and Green (2005)
- typos: equation numbers on p.14 and p.15
- typo on p.19: "still still significant (Model 7-8)"
- typo on p.41: "Before Fee FF4" for Model 1 and 2

Conclusion

- This paper shows that mutual funds show a positive investment elasticity, indicating allocational efficiency in capital flows
    - provides evidence of another role of mutual funds
    - financial intermediaries help to channel capital to promote economic growth and prosperity

Good luck!

Thank you!