

Research Proposal: Passive Funds Impact on Stock Responsiveness

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Introduction

Passive investing has grown significantly over the past decade, surpassing Active investing in equities. It is important to discuss what passive investing is beforehand, as it could be argued that no one is a passive investor as everyone makes the active decision to invest.

Passive investing has two primary definitions:

- a. Passive investors choose a portfolio, buy it and hold it long-term with no regard for profiting from short term variations or frequent trading. (Moltke & Sløk, 2024)
- b. A passive investor holds every security from the market, with each represented in the same manner as in the market. (Sharpe, 1991)

For the purposes of this paper, we will adopt Sharpe’s definition.

Recently Total Assets in Index Funds overtook Total Assets in Non-Index Funds. Figures 1 and 2 illustrate this development showing the level and share of assets.

Haddad, Huebner and Loualiche (2024), show through their model that an increase in the share of passive investing leads to lower price elasticities of demand which can lead to higher volatility, lower efficiency and illiquidity. If stocks become less responsive to trading demand, they may also adjust differently to new information.

This motivates the research question, “How has passive investing affected stock responsiveness to news.”

Methodology

In order to see these effects, I will use an event study as shown in equation 1, where the dependent variable is Cumulative Abnormal Returns (CAR) of stock i around an event.

$$CAR_{i,t} = \alpha + \beta \text{Passive Share}_{i,t} + \mathbf{X}'_{i,t}\Gamma + \epsilon_{i,t} \quad (1)$$

Where Passive Share denotes the fraction of stock i ’s ownership held by passive funds and $\mathbf{X}_{i,t}$ are control variables such as firm size, liquidity, volatility, interest rates etc.

For robustness, I plan on splitting the dataset into quintiles to test whether high-passive-ownership stocks exhibit systematically different responsiveness to news than low-passive-ownership stocks.

Data

I will use daily stock return data from CRSP to compute abnormal returns around news events. News events will be drawn from Capital IQ's Key Developments database. I will use 13F filings to compute the fraction of each stock held by index funds.

Expected Results

I expect larger cumulative abnormal returns (CARs) should be observed following major news events once passive ownership exceeds a critical threshold. I also expect the reaction to minor news events to be muted for higher passive ownership stocks. This would be consistent with Haddad, Huebner, and Loualiche's (2024) prediction that higher passive share reduces price elasticity of demand, amplifying price movements in response to shocks.

Figures

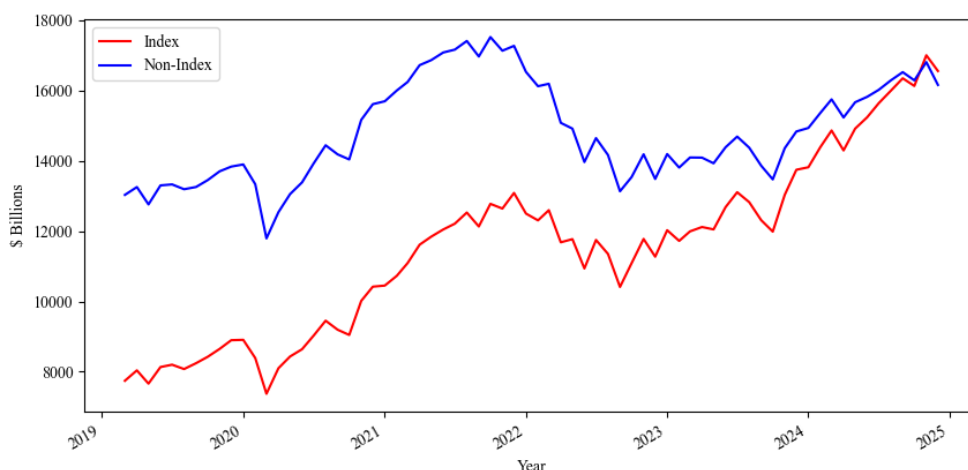


Figure 1: Index vs Non-Index Funds Total Assets

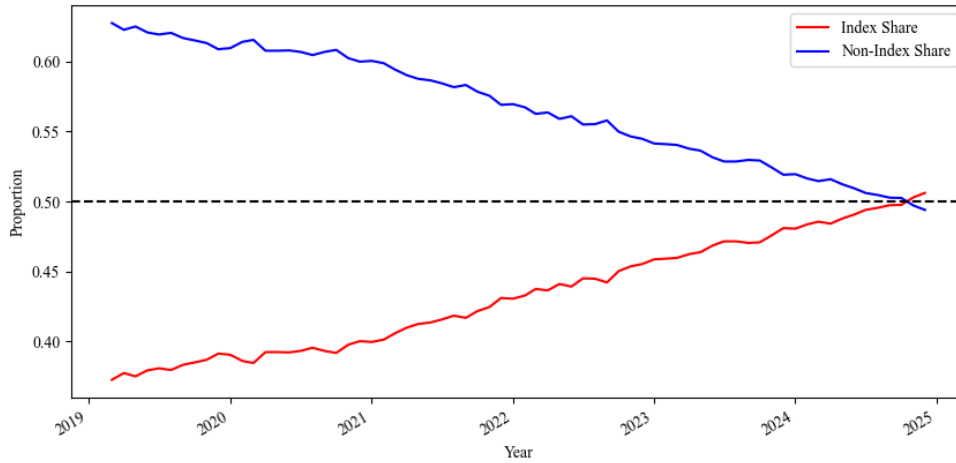


Figure 2: Index vs Non-Index Funds Share of Assets

References

- Haddad, V., Huebner, P., & Loualiche, E. (2021). *How competitive is the stock market? theory, evidence from portfolios, and implications for the rise of passive investing. Theory, Evidence from Portfolios, and Implications for the Rise of Passive Investing.*
- von Moltke, F., & Sløk, T. (2024). *Assessing the Impact of Passive Investing over Time: Higher Volatility, Reduced Liquidity, and Increased Concentration.*
- William F. Sharpe (1991) *The Arithmetic of Active Management*, Financial Analysts Journal, 47:1, 7-9, DOI: 10.2469/faj.v47.n1.7