Research Proposal: Impact of Rise in Passive Investing 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."

Preliminary Literature Review

As mentioned earlier Haddah, Huebner and Loualiche (2024) developed a model to show the impact of passive investing on stock prices. Their primary mechanism operates through the elasticity of demand. They model the individual investor's decision through their demand and their degree of aggresiveness (their elasticity) and then aggregate the investors to reach market equilibrium conditions.

The model shows that as the share of passive investors increases, aggregate elasticity declines if investors are intensive to market conditions. Their model further shows that a reduction in elasticity, leads to more unstable prices.

Moltke & Sløk (2024) provide extensive descriptive evidence on passive investing and adopt a measurement of passive investing that differs from mine. Using 13f filings, they compute the elasticity of demand of

stocks for each fund and if the value is sufficiently close to 0 they flag the fund as a passive investor. This approach has the advantage that it flags funds who are in practice passive even if they don't self-identify as passive investors. However, a key limitation is that 13f filings do not distinguish between funds owned by the same filing manager. For example Vanguard may simultaneously operate one fund that follows the index and another that actively trades, but both are aggregated under a single 13F report.

Samson (2024) investigates the effect of passive ownership on price informativeness. Their measure of passive investing is the one I employ as outlined in the Data section. However, they use data from 1990 to 2019 whereas from Figures 1 and 2, it is evident that from 2023 to 2025 the share of passive investing has sharply increased.

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.

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

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

In order to construct the passive share of each stock owned, I will use LSEG's data on funds' portfolio holdings and merge it with CRSP's Srviourship-Bias-Free-Mutual Funds Data to flag funds as index funds. In order to merge these datasets, I will use WRDS's MFLINKS dataset. In order to get the earnings date and time, I will use LSEG's IBES data. Finally, to compute stock returns and volatility, I will use CRSP's daily stock data.

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

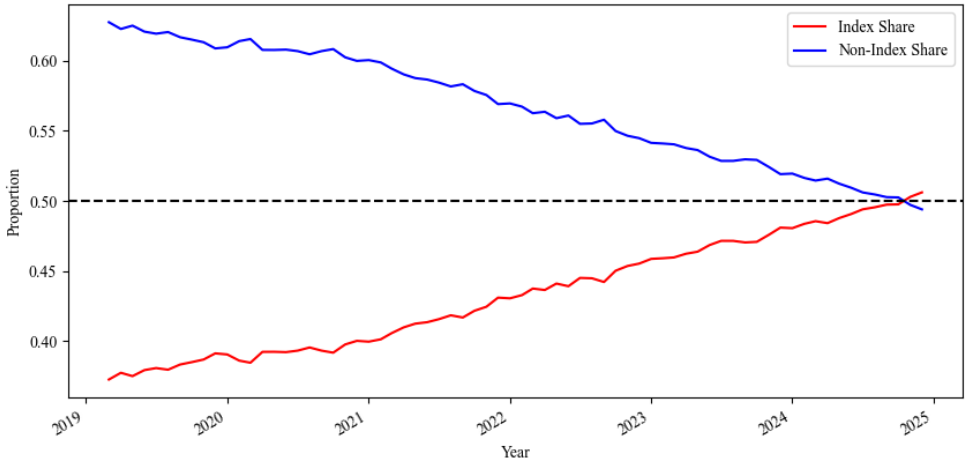

Figure 2: Index vs Non-Index Funds Share of Assets

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.*
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