

Passive Flows

Unterberg

WFA Meetings

Discussion – June 2026

Erik Loualiche — University of Minnesota

This Discussion

- Model intuition
- What do active investors do?

This paper

It is hard to be an active investors.

- Look for alpha
- Trade residual supply from passive — captive demand

This paper

It is hard to be an active investors.

- Look for alpha
- Trade residual supply from passive — captive demand

What happens when some active investors become passive?

- Life is even harder for active investors
- Socialism!

OPINION COMMENTARY

Is Indexing Worse Than Marxism?

The critique that passive investing is worse than a centrally planned economy doesn't hold up to scrutiny.

By **Burton G. Malkiel**

MARKETS & FINANCE • INVESTING • HEARD ON THE STREET

Is Your 401(k) Destroying Capitalism?

Target-date funds and other passive investments attract the ire of fund managers like David Einhorn. Is there a better mousetrap?

By **Spencer Jakab**



Money Stuff



Matt Levine

Index demand

You could take the cynical view, and a lot of people do.[1] The cynical view is that SpaceX has a private market valuation of, let's say, \$1.25 trillion, but that valuation has been set by Elon Musk and his friends without a lot of robust debate, and is arguably a little high given that SpaceX loses money on something like \$20 billion a year of revenue. Elon Musk and his friends would now like to sell their SpaceX stock to the public, ideally at a large markup to that \$1.25 trillion valuation. (Maybe \$2 trillion, or at least \$1.8 trillion.) The advantage of doing this is that the public is very large and has a lot of money, so it can buy a lot of stock. The disadvantage is that the public is not made up entirely of Elon Musk and his friends, and if you say to public investors “hey this company is worth \$2 trillion,” they might say “why?”

But not all of them. There are, traditionally, two sorts of investors who will buy stock without worrying about the price:

- Index funds, and

The view from the active investor window.

What happens when investors become passive?

- Rebalancing from assets outside to assets inside the index
- Prices of stock inside index ↑
- Prices of stock outside of the index ↓

What happens to active investors when some become passive?

- “Constrained” to hold residual supply of liquidated assets
- Two forces
 - ▶ Lower risk absorption capacity: higher risk premia, low prices
 - ▶ Deviation from their optimal portfolio: lower prices

Simple model: pricing

Three investors: active, passive, very active.

- Setup demands *independently*, solve for price from market clearing
 - ▶ Residual supply of non-benchmark assets: $\bar{\theta} - (\lambda_P + \lambda_A \xi) \omega_M$
 - ▶ Optimal portfolio of active investors from mean-variance: $\theta^* = (\gamma \Sigma)^{-1} (S - D)$
 - ▶ Market clearing

$$\underbrace{(\lambda_D + \delta \lambda_A)}_{\# \text{ active}} \cdot \theta^* = \text{residual supply}$$

The two forces shaping the price

$$S - D = \underbrace{(1 - m)}_{\text{non-benchmarked demand}} \cdot \frac{1}{\lambda_D + \delta \lambda_A} \cdot \underbrace{-\gamma \Sigma \bar{\theta}}_{\text{MV}} + \underbrace{m}_{\text{benchmarking demand}} \cdot \frac{1}{\lambda_D + \delta \lambda_A} \cdot \gamma \Sigma \cdot \underbrace{(\omega_M - \bar{\theta})}_{\text{premium for deviation}}$$

Simple model: passive experiment

Comparative static:

- Increase passive $\lambda_P \uparrow$, decrease passive $\lambda_A \downarrow$
 - ▶ Increases the benchmarked (inelastic) demand $dm = (1 - \xi)d\lambda_P$
 - ▶ Lowers risk absorption (elastic demand) $d(\lambda_D + \delta\lambda_A) = -\delta\lambda_P$

Pricing

$$dS = \frac{\gamma}{\lambda_D + \delta\lambda_A} (1 - \xi) \Sigma \omega_M d\lambda_P +$$
$$\frac{\gamma}{\lambda_D + \delta\lambda_A} \Sigma (\bar{\theta} - m\omega_M) \frac{-d\lambda_P}{\dots}$$

Neat model Haddad 2012

Active investors in practice

Estimating equation.

$$S_t = f(\lambda_{P,t}; \Theta)$$

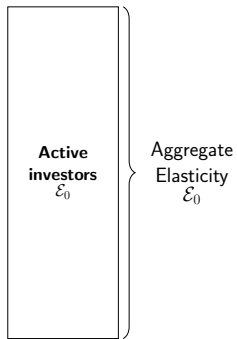
- Run counterfactuals with $dS_t = \partial_1 f(\lambda_{P,t}; \Theta)$
- Exclusion restriction: passive investors only affect prices through the market clearing equation

Two objections in practice.

- Strategic response: if almost all investors become passive, Jane Street and CitSec will become even more aggressive
- Front running: rebalancing is pre-determined, index flows are predictable

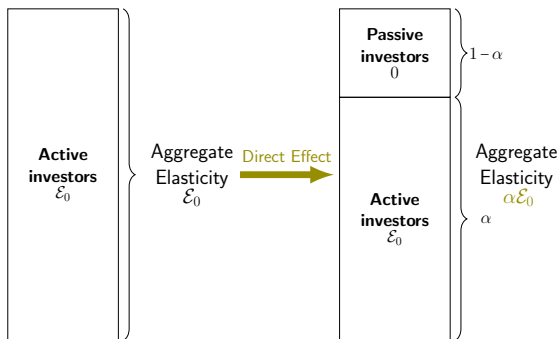
Strategic Response

Haddad, Huebner, Loualiche (2025)



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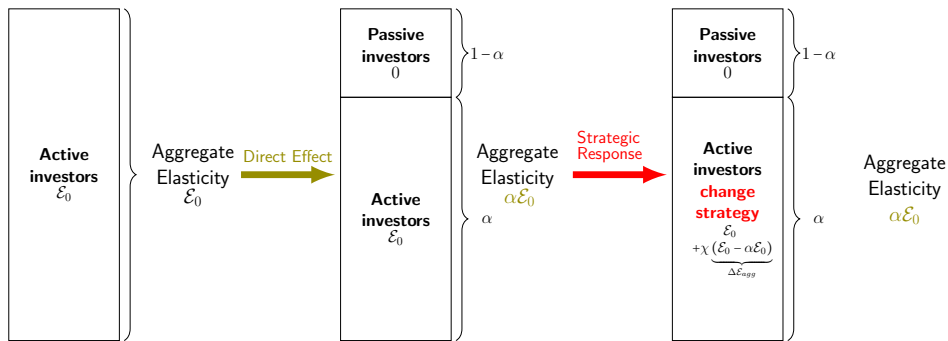
Haddad, Huebner, Loualiche (2025)



- Empirical increase in fraction of passive investors: $\alpha = 70\%$
 - ▶ No strategic response ($\chi = 0$): proportional reduction, $\mathcal{E}_{NEW} = \alpha\mathcal{E}_0 = 70\%ptm\mathcal{E}_0$

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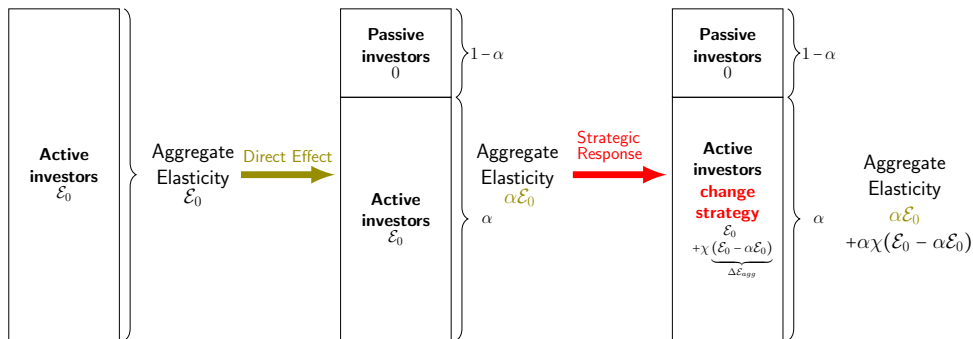
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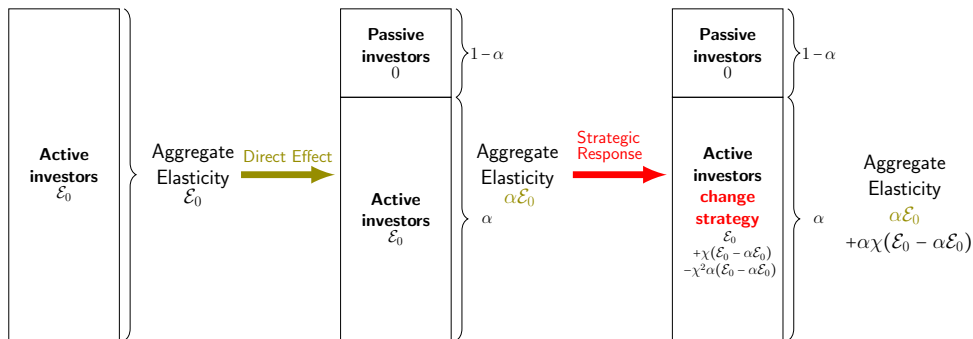
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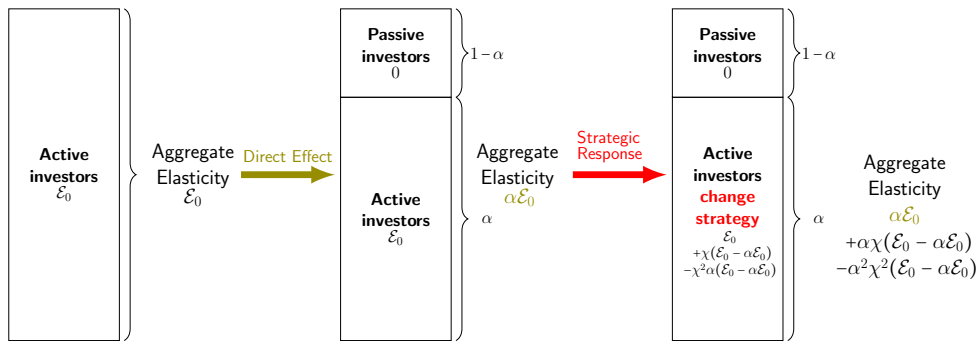
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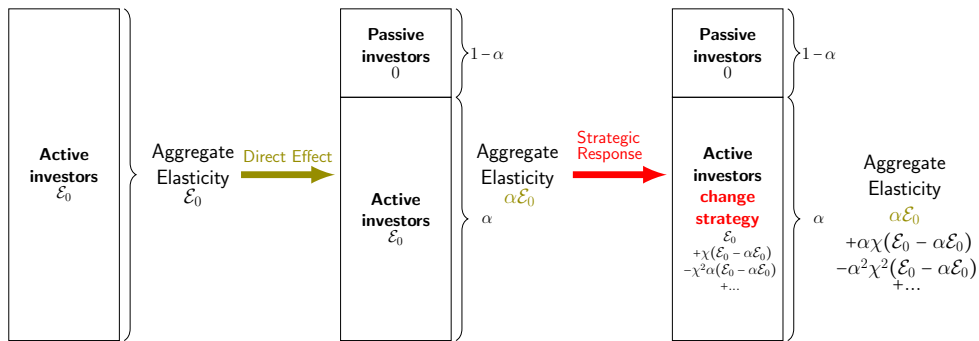
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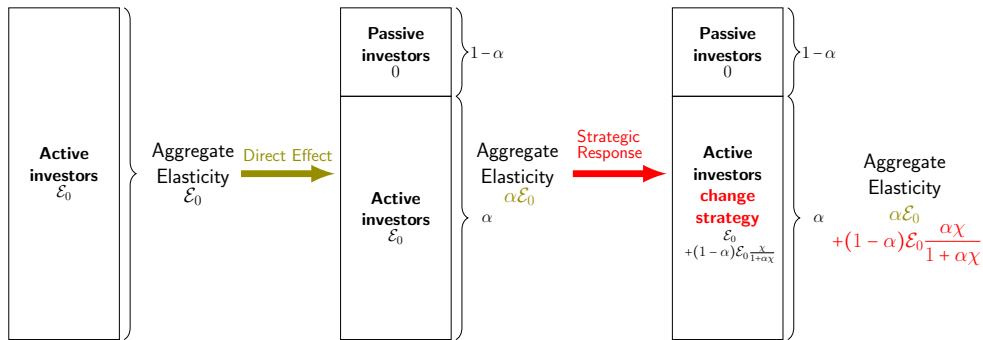
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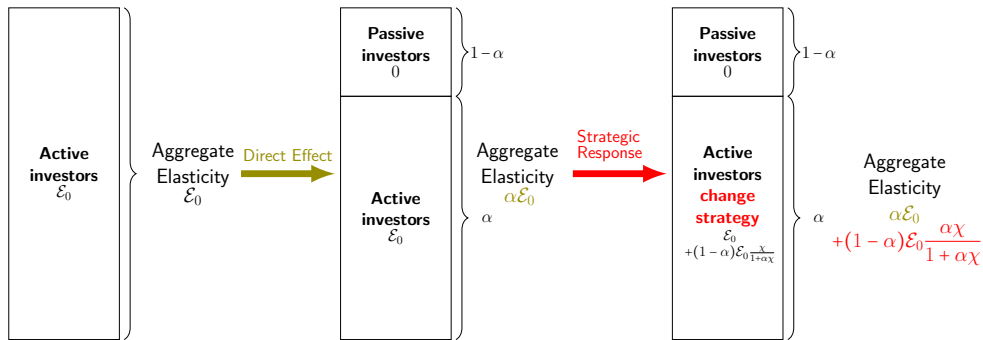
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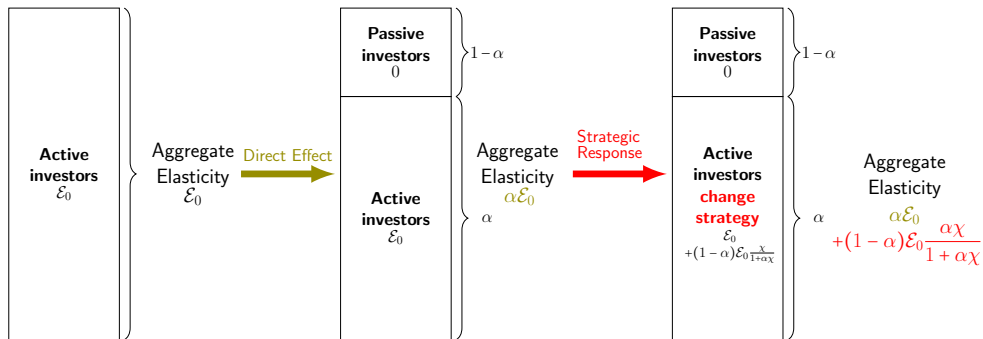
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- Empirical increase in fraction of passive investors: $\alpha = 70\%$
 - ▶ No strategic response ($\chi = 0$): proportional reduction, $\mathcal{E}_{NEW} = \alpha \varepsilon_0 = 70\% \text{ptm} \varepsilon_0$
 - ▶ "Perfectly competitive financial markets" ($\chi \rightarrow \infty$): nothing happens, $\mathcal{E}_{NEW} = \alpha \varepsilon_0 + (1 - \alpha)\varepsilon_0 = \varepsilon_0$

Strategic Response

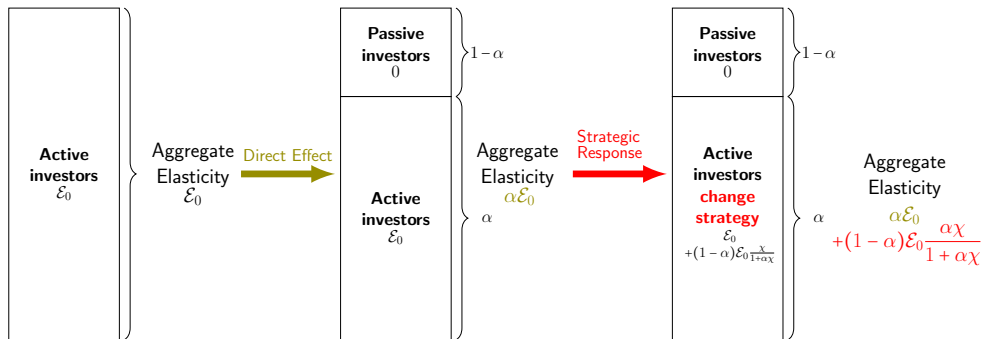
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- Empirical increase in fraction of passive investors: $\alpha = 70\%$
 - ▶ Identify the *constant* degree of strategic response using the cross-section $\rightarrow \chi = 2$

Strategic Response

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- Empirical increase in fraction of passive investors: $\alpha = 70\%$
 - ▶ Identify the *constant* degree of strategic response using the cross-section $\rightarrow \chi = 2$
 - $\Rightarrow \mathcal{E}_{NEW} = 87.5\% \cdot \mathcal{E}_0$ (vs 100% with full response and 70% without strategic response)

Flows are predictable

Harvey, Mazzoleni, Melone: *The Unintended Consequences of Rebalancing*

- Rules-based rebalancing cost: 8bps
- Front running is profitable

Final Thoughts

Great paper.

Take away

- Passive investors distort residual supply
- Price distortions amplified by decreased risk capacity