

Don't Blame Indexing for Your Problems

February 28, 2024

The trend towards passive investing shows no sign of stopping. It is generally applauded by finance professors but condemned by active managers like David Einhorn. In an intriguing interview with Barry Ritholtz, Einhorn articulated a widely held view:

I view the markets as fundamentally broken... Passive investors have no opinion about value. They're gonna assume everybody else's done the work, right?'

Einhorn is a smart guy whom I respect, and he might be right that the market has grown less efficient over time. But it's not obvious that the possible deterioration of market quality has anything to do with index funds or passive investment. And further, if indexing goes up, you might expect the remaining active managers to perform better (less competition) and not worse.

Much of the discourse about passive investing is simply misguided. Since passive investors mostly do not trade, it is mostly true that they do not impact market prices; what really matters is what the non-passive investors are doing. Now, I say "mostly true" because there are complicated mechanisms through which the presence or absence of passive investors may impact prices, but the key thing about passive investors is that they do not trade. As we say in the homicide squad, "no body, no crime," and here we have "no trade, no crime."

Being passive in markets is like being neutral in war. Example: in 1940, Germany invaded France and in less than two months, France fell. America was neutral, in other words, passive. Would the best way to understand this event be to say, "America conquered France," or "due to the actions of the US military, France fell?" No! Germany conquered France. Similarly, consider the much-discussed concentration of U.S. market cap into the Magnificent Seven. Should we say, "Passive investors drove up the price of the Magnificent Seven?" Nonsense, they did nothing of the kind.

Now, you could argue that passive investors should not be passive, just as you can argue that America should not have been neutral, but it would be absurd to make these counterfactual claims the center of your worldview. It is just not true that inflows to S&P 500 index funds drove up the price of Nvidia relative to McDonald's.² Those flows impacted Nvidia and McDonald's equally in proportion to their float-adjusted market caps. Somebody else set the relative prices of Nvidia and McDonald's; namely, the other non-passive investors trading with each other. Similarly, somebody else, not America, was responsible for the fall of France.

There has been much handwringing about the fraction of the market that has become passive. Should we be alarmed if it is more than 50%? What about 90%? Surely Congress should step in and outlaw indexing if passive rises above 95%?

Introducing Owen Lamont, Ph.D.

Senior Vice President, Portfolio Manager, Research



Owen joined the Acadian investment team in 2023. In addition to more than 20 years of experience in asset management as a researcher and portfolio manager, Owen has been a member of the faculty at Harvard University, Princeton University, The University of Chicago Graduate School of Business, and Yale School of Management. His professional and academic focus is behavioral finance, and he has published papers on short selling, stock returns, and investor behavior in leading academic journals, and he has testified before the U.S. House of Representatives and the U.S. Senate. Owen earned a Ph.D. in economics from the Massachusetts Institute of Technology and a B.A. in economics and government from Oberlin College.

¹ Recording available at <https://www.bloomberg.com/news/audio/2024-02-08/masters-in-business-david-einhorn-podcast>. Transcript available at <https://ritholtz.com/2024/02/transcript-david-einhorn/>.

² References to these and other companies in this commentary should not be construed as recommendations to purchase or sell any specific securities.

No. There is no magic number, other than 100%, at which the market suddenly flips to being dysfunctional due to passive ownership. What matters is the existence of a sufficient number of informed active investors with a sufficient number of dollars and the existence of a liquid market with multiple types of interacting traders. As long as those conditions hold, you can have a well-functioning, efficient market with informative prices, and it doesn't matter whether passive is 1% or 99% of the market.

Now, as an empirical matter, it is possible that indexing has hurt market efficiency, but that is a statement about who's left in the non-passive sector. Let me give you an example. Suppose there are 100 investors in a stock market. We start with zero passive investors. Now suppose that 50 of the investors decide to switch to passively holding the market. Does that make the market less efficient, crushing price discovery and paving the way for Marxism? Well, it depends on who switches. If the 50 smartest and best-informed investors switch to passive, then yes, it could make prices less informative. If the 50 craziest and least informed investors switch, then maybe market prices get *more* informative. What matters is who stays in the market, providing price discovery and liquidity.

I am open to the idea that the market is getting less efficient and that this has something to do with indexing. But if so, that would reflect a complicated set of interacting factors as opposed to a simple cause-and-effect process. World War II had many causes, and maybe American isolationism and neutrality was one of them, but the main cause was the actions of Germany and Japan. In the investing context, while "indexing caused my value strategy to fail" might be a slightly more credible statement than "the dog ate my homework," it is a lot less credible than "value investing has gone out of style with non-passive investors."

Haters gonna hate

From their birth in the 1970s, index funds were attacked as un-American and doomed to failure. Similarly, as passive investing has grown, a variety of objections have been made:

- In 2019, noted financial theorist AI Gore said, "I think the large passive managers have a real difficult decision to make. Do they want to continue to finance the destruction of human civilisation, or not?"³
- In 2019, Michael Burry of The Big Short fame argued that inflows into index funds had created a bubble and "like most bubbles, the longer it goes on, the worse the crash will be."⁴
- In 2016, Alliance Bernstein put out a report with the absurd title, "The Silent Road to Serfdom: Why Passive Investing is Worse Than Marxism," which was discussed by the indispensable Matt Levine of Bloomberg.⁵

While many of these objections revolve around governance issues, others seem to have a moralistic concern that passive indexing "free rides" on investors who toil to collect information. The able Cliff Asness ably refuted these arguments in a 2016 op-ed, "Indexing is Capitalism at Its Best:"

*Piggybacking on prices developed by other people is fine. That's how free markets work... Free riding on price signals isn't a bug of capitalism to be exploited by those greedy red indexers; rather, the use of price signals by those who played no role in setting them may be capitalism's most important feature.*⁶

More passive does not mean less efficient

Let's go back to the example where we have a stock market consisting of 100 investors owning a number of firms. Suppose the 100 investors are all active investors and each has \$1 in wealth so that the total market cap of the stock market is \$100. There is zero passive investing.

Now suppose that 9,900 more investors enter the market, they each have \$1, and they all invest passively. Further, all the firms in the stock market collectively issue \$9,900 more equity on a pro-rata basis, and each firm scales up its operations accordingly. Now we have a market that is 99% indexed, but the same original 100 active investors are still doing exactly what they did before, holding the same \$100 of stock at the same prices, getting the same economic value as before, and all the prices are unchanged. Now obviously I've made a lot of assumptions here, but the point is that it is not some law of math that the entry of passive investors changes prices; it depends.

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Passive Investing: Reshaping Financial Markets?

Does passive investing reflect a high level of efficiency that prevents active management from adding value? Or might its very success create new forms of opportunity as well as risk? This talk explores common misconceptions around "the rise of passive."

³ "AI Gore Blasts BlackRock, Brussels Breakdown, Rewild the U.K.," Financial Times, Dec. 11, 2019.

⁴ "The Big Short's Michael Burry Explains Why Index Funds Are Like Subprime CDOs," Bloomberg, September 4, 2019.

⁵ "Are Index Funds Communist?," Bloomberg, August 24, 2016.

⁶ "Indexing Is Capitalism at Its Best," Bloomberg, September 2, 2016.

The illogical assertion that passive investing can cause mispricing appeals even to smart people such as Bloomberg columnist John Authers:

The problem with passive funds is that as long as they're taking in new money, they'll accept the prices then available in the market. Thus, the more a company is valued, the more the fund will buy of that company, tending to push the price up further. With tech performing well anyway, the argument is that the weight of money coming into passive funds each month will add to the sector's momentum, bringing it further and further away from the rest.⁷

Huh? That is not how math works. If an S&P 500 index fund receives inflows, the fund buys x% of the shares outstanding of both McDonald's and Nvidia. You'd expect both stocks to rise the same percentage amount. Now, maybe you could argue that McDonald's and Nvidia have different price elasticities, but that is a different mechanism. You could also argue that all S&P 500 stocks will become overpriced, but that is a statement about narrow indexing, not about the momentum of tech stocks.

Let me compare two fictional countries: the United States of Active Managers (USAM)—"in active managers we trust"—and the Union of Socialist Passive Managers (USPM)—"from each according to market cap, to each according to market cap."

USAM is a backward country with minimal technology, a population of 200 million people, and a GDP per capita of \$5,000. It has a small stock market with a market cap consisting of \$100 billion. Indexing is banned in USAM.

USPM is much richer and more technologically advanced, with a population of 332 million and GDP per capita of \$76,000. It has a stock market with market cap of \$36 trillion. Indexing is widespread in USPM and 99.7% of the market is held by passive investors. Surely USPM has a horrible stock market that is inefficient?

No! Both markets have exactly the same amount of dollars that must be held by active investors: \$100 billion. Therefore, if you think USAM is efficient because it has \$100 billion of active investors trading among each other and arriving at price discovery, you should think the same about USPM. Who cares about the 99.7% of passively held assets?

Get ready for the big reveal. I will now tell you the identity of these countries. USAM is the U.S. in 1970. And USPM is the U.S. in 2024 under the hypothetical oppressive 99.7% passive investing regime.

I know what you're thinking: It's absurd to compare America of 1970 with America of 2024 (especially since I have not adjusted for inflation). They are totally different countries with different market caps. True! But these objections highlight my basic point. What is important are the non-passive investors: are there enough of them, are they smart, do they have the right incentives, are they able to express their views via trading? What is not important are the passive investors: these are like the audience in a play, they just sit there, watching the activity on stage.

OK, let me hit you with yet another framework. Authers summarizes Einhorn's argument as:

Everyone in the passive world relied on everyone else to do their homework for them and set a sensible price for stocks...⁸

This description of passive is correct. But is it bad to rely on someone else to do your homework? If the goal is to get good grades on homework, I'd gladly rely on, say, Einstein to do my physics homework.

Suppose students come in two types: overachievers and slackers. Overachievers are diligent students who spend 90 minutes a night doing homework. Slackers are lazy students who spend 10 minutes a night on homework. We all agree that the more overachievers there are, the higher will be the average homework score. Now suppose we introduce a new concept called "cheating." Cheaters will simply copy another random student's homework. Question: if a random 50% of the students decide to cheat, will the average homework score go up or down? The answer is obvious: no effect.

Question: if only slackers decide to cheat, will the average score go up or down? The answer: obviously the score will go up. So that is a scenario in which cheating (passive investment in homework completion) does influence outcomes, but it makes average scores higher, not lower.

What do we learn from the homework example? The key concept is not how much cheating there is. The key concept is: who doesn't cheat? That is, who are the active homework-doers? It makes no sense to say, "the advent of cheating will obviously diminish homework scores." And there is no magic number, say 90%, by which the proportion of cheaters drives down average scores.

⁷ ["Magnificent or Marxist? Passive Investing is Back on Trial,"](#) Bloomberg, February 9, 2024.

⁸ Authers paraphrasing Einhorn in ["Passive Resistance, Round II – Where Price Discovery Survives,"](#) Bloomberg, February 16, 2024.

As with passive indexing, we cannot have 100% cheaters, because then there will be nobody to cheat from. And it is probably a good idea to have at least 5 or 10 non-cheating over-achievers, because if we have just one honest nerd, the nerd might have a bad day. But as a general proposition, all that matters is the population of active students, not the population of passive students.

Academic models with passive investors and inefficient markets

So far, I hope I have convinced you that it is not mechanically true that higher indexing equals less-functional stock markets. What matters is not how many passive investors there are, what matters is how many active investors there are. We need to have enough of them.

And that brings me to incentives. Let's go back to the homework example. We can imagine all sorts of outcomes depending on the different incentives. Maybe if everyone but me is cheating, I just randomly answer the homework questions to minimize effort. Or maybe, if all the slackers cheat but the overachievers do not, the overachievers work harder in order to be above average. While cheating by random students does not change the average score, the introduction of cheating may change incentives. It's complicated.

Academic economists have studied the impact of passive investing on market efficiency, and the answer is: it's complicated. Is it possible to devise a theory whereby the rise in passive leads to an inefficient market and the overvaluation of the Magnificent Seven?

Before answering, let me introduce you to Lamont's Fundamental Law of Active Theorizing[®]: Sufficiently motivated theorists can devise a theory to produce any desired result, following the equation that the theory's academic impact equals the cleverness of the theorist multiplied by the square root of the theory's implausibility divided by the number of assumptions required. So, with the homework example, I'm sure you could concoct scenarios under which cheating raises average scores, lowers average scores, has no effect, or possibly produces a set of Magnificent Seven nerds who dominate the homework market. We can also imagine transitions from no cheating to high cheating regimes with complex dynamics before settling to steady state.

With that in mind, let us review some academic papers. Garleanu and Pedersen (2022) say passive makes the market more inefficient, and that this inefficiency helps active managers to outperform:

Another trend over the past decades is the decline in the cost of passive management. We show that such a decline should lead to a rise in passive management (at the expense of self-directed investment and active management), consistent with the development in the 2000s... Further, a reduced cost of passive management leads to an increase in market inefficiency... leading to stronger performance of active... These predictions are consistent with the empirical findings...⁹

Jiang, Vayanos, and Zheng (2022) think that passive could distort prices:

Flows into passive funds raise disproportionately the stock prices of the economy's largest firms—even when the indices tracked by the funds include all firms... We estimate that passive investing caused the 50 largest US firms to rise 30% more than the US stock market over 1996–2020.¹⁰

So, they provide a rigorous theory (but one that is certainly complicated and arguably far-fetched) for the claim that the passive flows could lead to the Magnificent Seven.

Coles, Heath, and Ringgenberg (2022) find that as an empirical matter:

An exogenous increase in index investing leads to lower information production as measured by Google searches, EDGAR views, and analyst reports, yet price informativeness remains unchanged. These findings are consistent with an equilibrium in which investors choose to gather private information whenever it is profitable. As index investing increases, there are fewer privately-informed active investors (so overall information production drops), but the mix of investors adjusts until the returns to active investing are unchanged. As a result, passive investing does not undermine price efficiency.¹¹

⁹ Nicolae Garleanu and Lasse Heje Pedersen, "Active and Passive Investing: Understanding Samuelson's Dictum." Review of Asset Pricing Studies 12, no. 2 (2022).

¹⁰ Hao Jiang, Dmitry Vayanos, and Lu Zheng, "Passive Investing and the Rise of Mega-Firms," Working Paper, 2022.

¹¹ Jeffrey Coles, Davidson Heath, Matthew Ringgenberg, "On Index Investing." Journal of financial Economics 145, no. 3 (September 2022).

Last, Bond and Garcia (2022) say:

We develop a benchmark model to study the equilibrium consequences of indexing in a standard rational expectations setting... A decline in indexing costs directly increases the prevalence of indexing... augmenting relative price efficiency. In equilibrium, these changes in price efficiency in turn further increase indexing, and raise the welfare of uninformed traders.¹²

So, there you have it: the academic consensus is as clear as mud. Passive investing either makes relative pricing more efficient, less efficient, or has no effect. One common thread to many models, however, is that as passive investing goes up, informed active investors should benefit, which has not been the case in recent years.

So where does that leave us? In a healthy market, we need some smart active investors, including smart fundamental investors like Einhorn and smart systematic investors like Acadian Asset Management. We also need some non-smart non-passive investors for the smart people to trade with; such traders appear plentiful. Yes, it is true that the passive investors are benefiting from the efforts of smart investors, but they are not necessarily making life worse.

¹² Philip Bond and Diego Garcia, [“The Equilibrium Consequences of Indexing.”](#) The Review of Financial Studies 35, no. 7 (July 2022).

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