INDEX FUND SILLINESS: INDEXING DOESN’T DISTORT ANYTHING
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August 2017

In a burst of silliness, index funds have recently been compared to Communism, called un-American, and regarded as proof of our essentially lazy nature.

But those are softballs. In a harder-edged attack, cash flows into index funds have been blamed for pushing the prices of a few favored stocks up to astronomical levels, distorting markets and making indefensible capital allocation decisions. The stately New Yorker reports:

A market with more passive investors than active ones will continue to push money into the largest firms, whether these companies are actually performing strongly or not.

Timothy O’Neill, the global co-head of Goldman Sachs’ investment-management division, told me [James Ledbetter] that essentially every new indexed dollar goes to the same places as previous dollars did. This “guarantees that the most valuable company stays the most valuable, and gets more valuable and keeps going up. There’s no valuation or other parameters around that decision,” he said.

O’Neill fears that the result will be a “bubble machine” — a winner-take-all system that inflates already large companies, blind to whether they’re actually selling more widgets or generating bigger profits. Such effects already exist today, of course, but the market is able to rely on active investors to counteract them. The fewer active investors there are, however, the harder counteraction will be.

The New Yorker’s James Ledbetter and his interviewees are not alone. Investment gurus Bill Ackman of Pershing Square Capital and Rob Arnott of Research Affiliates are among the many who echo Ledbetter’s concerns. And anti-indexing fever has spread to academia; in The Atlantic, Frank Partnoy reports on studies showing that “common ownership” by index funds of companies that are supposed to compete with each other will reduce competition:

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This report was prepared as an AJO (Philadelphia, PA) white paper and should be handled as copyrighted material.

Letters received from John Geissinger, Philip Ruden, and Ted Seides inspired the section on mismatch between the active-manager and index-fund universes. Thanks are also due to John Thorndike of GMO, who pointed out my misrepresentation, in an earlier version of this article, of the views of Seth Klarman; this is now corrected. If you have the earlier version (which does not contain this paragraph), please destroy it.


[If investors own a slice of every firm, they will make more money if firms compete less and collectively raise prices, at the expense of consumers. Knowing this, the firms’ managers will de-emphasize competition and behave more cooperatively with one another.]

Even the revered value manager Seth Klarman of Baupost Capital, who seems to understand the situation, talks about flows into index funds not affecting relative valuations as if that’s a bad thing:

One of the perverse effects of increased indexing...activity is that it will tend to ‘lock in’ today’s relative valuations between securities... Thus today’s high-multiple companies are likely to also be tomorrow’s, regardless of merit, with less capital in the hands of active managers to potentially correct any mispricings.

Index funds are bad if they distort prices and they’re bad if they don’t. Got it.

Are these concerns well-founded? No, they’re not. Index funds don’t distort anything.

APPLE AND ORANGE

Let’s imagine a world with only two stocks: Apple, a computer and smartphone manufacturer worth $1 trillion; and Orange, a conglomerate consisting of all of the other companies in the world and worth $500 billion. Apple sells at a P/E of 20 and Orange sells at a P/E of 10, so the two companies have the same “fundamental” value, assuming for the sake of argument that a single year’s earnings fully captures the underlying value of a company.

This world also contains an index fund, which, at the outset (the BEFORE panel in Exhibit 1), manages 25% of the assets in the “world,” and a population of active managers. We won’t say how many active managers, because we don’t need to. There are just two kinds of managers, index and active, but I’m being careful not to say there is only one active manager because, later on, we’ll want to know how growth and value managers react to the changing situation in our imaginary market.

The change will be caused by a flow of assets from active to index, such as is taking place right now in the real world.

The exhibit shows the market cap of the market, the two stocks in it, and the two categories of managers — index and active.

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6 I don’t mean to disparage that fine French phone company, Orange, formerly known as France Télécom. My example has nothing to do with them. I just wanted a name for a hypothetical company that is as distinct from Apple as possible.
To go from **BEFORE** to **AFTER**, we redeem (sell) one-third of the active managers’ assets — that is, 25% of the total capitalization of the market — to buy, with the proceeds, shares of the index fund. Watch Apple’s price become even more bubbly as we execute the trade, as shown in the **AFTER** panel of the exhibit….oops, it doesn’t. What happens to relative valuation is *nothing*.

The valuation of Apple hasn’t changed. The valuation of Orange hasn’t changed. The shares have changed hands but nothing else has changed.
However, the shares in the index fund are now being managed by a robot instead of by a human portfolio manager. Note that the robot does — has to do — exactly what the human portfolio managers do in aggregate. The humans analyze Apple and Orange and the robot does not, yet the robot’s portfolio weights and the humans’ aggregate portfolio weights are exactly the same.

This result is what Bill Sharpe, perhaps the greatest thinker in finance, predicted in 1991. He did so by using basic arithmetic, his application of which he called the Arithmetic of Active Management. It is not possible for any other result to emerge. The holdings weights of all active managers, taken as a unit, must always exactly equal the holdings weights of the index from which the active managers select securities.

Perhaps you think I’ve made the example too simple and stylized. You’re welcome to create your own example using more stocks, more realistic or complex markets, more or different kinds of managers, or more diverse valuations. As long as the universe from which active managers select their stocks is the same as the universe from which the index fund is constructed, you’ll get the same result because it’s basic arithmetic: all the characteristics of the market, the index fund, and the aggregate of active managers are exactly the same. (Of course, active managers differ from each other.)

Thus, moving assets from the active manager universe to an index fund does not and cannot and never will change the weights or valuations of any stock. Indexing doesn’t distort anything. And not indexing distorts the paychecks of investment managers relative to the paychecks of their customers.

**Suppose the active management and index fund universes aren’t identical?**

You’ll note, as some astute readers of earlier drafts of this essay already have, that all of the above applies exactly if, and only if, actively managed portfolios and the index fund are drawn from the same “universe” or set of stocks. In the real world, most index fund dollars are invested in the S&P 500 while active managers select from a much broader universe.

What are the consequences of this fact? Over the decades, a number of researchers have found an “index inclusion effect,” in which stocks added to the S&P 500 earn a temporary excess return due to index-fund demand. This implies a slightly lower subsequent return. Active managers, noting this fact or guessing at its existence, might well overweight stocks that are not in the S&P 500 or “play” the inclusion effect for its short-term rewards.

The difference between the active management selection universe and the S&P 500 also makes the Arithmetic of Active Management identities inexact. Because of this difference, active managers could, in aggregate, outperform or underperform the S&P 500 (but not the universe from which they choose stocks) in any given period.

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But no one is making investors buy only index funds benchmarked to the S&P 500! There are many other indices and index funds, including several “all-stock” funds such as the Vanguard Total Stock Market index fund. This fund has, over time, been variously benchmarked to the Wilshire 5000, the Dow Jones U.S. Total Stock Market Index (which is just the renamed Wilshire 5000), the MSCI US Broad Market Index, and the CRSP US Total Market Index.

If active managers select from this broad universe — which, ironically, contains only about 3600 stocks despite the “5000” name, having been reduced by mergers, acquisitions, and private-equity buyouts — and their aggregate returns are compared to those of an index fund constructed from the same universe, then the Arithmetic of Active Management will apply exactly. The same principle applies for international markets or for any grouping of markets.

**NOT ALL ACTIVE MANAGERS CAN BE VALUE MANAGERS**

Now, what function do active managers serve in our imaginary world?

We tend to think of active managers as imposing discipline on the market by identifying and buying (overweighting) underpriced securities and avoiding (or underweighting) overpriced securities. By acting in this way, active managers prevent capital from being allocated frivolously to whatever companies are popular or faddish at a given time. We’d ordinarily call such a manager a “value manager.”

But let’s look again at the exhibit. The aggregate of all active managers holds the market portfolio. They favor neither value nor growth on average. Of course, each manager has his or her own style, and many will be value-oriented. But, in order for markets to clear and have all assets held, an equivalent number of active managers (on a capitalization-weighted basis) have to be growth managers.

Some people assert that growth investing is done mainly by individuals managing their own portfolios on a stock-by-stock basis, but we need to consider these investors to be active managers too. After all, their portfolio weights differ from those of the benchmark and they allocate capital where they think it will be most profitable. That’s what active managers do.

If every active manager tried to be a value manager, they wouldn’t be able to. Their aggregate holdings would still sum to those of the market, and because the market isn’t tilted toward value or growth, the population of would-be value managers wouldn’t be either. The 100% market share of value investing (in my imaginary example) would eliminate value investing, other than on a relative basis where some managers are more value-oriented than others (but those that are less value-oriented are, necessarily, really growth managers).

**SHOULD EVERYONE INDEX?**

What I’ve been saying is, of course, very different from arguing that active management is a bad idea and that indexing is the only way to go. I would never say that.
A small number of great active managers have beaten the market, or their benchmarks, for long periods and by large amounts. I've documented their feats in an article that, while now quite out of date, is still worth reading to remind ourselves both how difficult it is to beat the market for long periods and how rewarding it is to find managers who can do so. It is here: The Greatest Return Stories Ever Told. Inquisitive souls are encouraged to update it; you have my permission in advance. (It's a lot of work collecting the data.)

THE TWO CONDITIONS FOR CHOOSING ACTIVE MANAGEMENT
Moreover, the greater the proportion of total market value that is indexed, the greater the concentration of inefficiency in the remaining, actively-managed portion of the market — and, thus, the greater opportunity for the truly skilled to add value. Of course, active management is still a zero-sum game and you have to meet the “two conditions” of active management in order to win, just as you always have to do.

The two conditions, so called by Barton Waring and me in our 2003 article, “The Dimensions of Active Management,” are (1) you have to believe that skillful managers exist, that is, that some managers (out of a larger population) can beat the market or their benchmarks, not just by luck or random variation, but through the application of true skill; and (2) you have to believe you can identify these managers in advance. It’s a neat — and profitable — trick if you can do it.

CONCLUSION
At the risk of seeming lazy — as lazy as an index fund investor — I conclude with a long quote from my friend Jason Zweig, who, by writing sense and lampooning nonsense in The Wall Street Journal, has probably saved investors more money than anyone other than Jack Bogle:

Many active managers are arguing that indexing must, by construction, become invalid once too many people believe in it. We must be in an indexing “bubble,” they argue, because the strategy has become such a mindless consensus.

I’m not sure that argument holds up. Almost everyone with at least a high-school education believes that the world is round, but that consensus does not mean that the world must be flat. A belief isn’t wrong merely because a lot of people share it.

And active investors created bubbles of their own for centuries before index funds were even dreamed of….Who was overvaluing the market in 1999, just before technology stocks fell by more than 80%? Who was overvaluing stocks in 1972, before the U.S. stock market dropped by nearly half? Who drove stocks to record-high valuations in 1929, before they fell by nearly 90%? Index funds were small in 1999, neonatal in 1972, and nonexistent in 1929…

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8 https://larrysiegeldotorg.files.wordpress.com/2014/07/barclays-greatest-joi.pdf
If index funds cause market bubbles, they’re not nearly as good at it as human beings are. Why should we be more afraid of index funds causing a bubble today than anybody was of active investors causing one in 1999 or 1972 or 1929? The Panic of 1907, the Panic of 1873, the Panic of 1857, the Panic of 1837, the crash of 1792 and the pan-European bubble of 1720 were all inflamed by human stock-pickers long before the idea of an index fund had ever occurred to anybody.10

Smart and rich as the aforementioned gurus are, then, they did not get this right. Indexing does not distort anything.

In future work, I will sketch out the issues involved in characterizing the equilibrium between active and indexed investors for setting prices in asset markets and for allocating capital in the real economy.

10 http://jasonzweig.com/and-now-for-something-on-index-funds/