BARRON'S COVER

Man vs. Machine: How Has Indexing Changed the Market?

The active/passive debate has obscured a major concern: Will increased indexing impact the market.

By
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Jon Krause for Barron's

We still call it a stock market, but these days it has many more indexes than it does stocks: There are nearly 6,000 indexes today, up from fewer than 1,000 a decade ago. Meanwhile, the number of stocks in the Wilshire 5000 Total Market Index has shriveled to 3,599, from 7,562 in 1998.

The index numbers, from Bloomberg Intelligence, are staggering, though the trend should be familiar: Indexing has enjoyed a larger halo in recent years, and the exchange-traded-fund industry has been enthusiastically churning out new products. Meanwhile, the burdens of public listings and easier access to private capital has shrunk the available number of stocks.

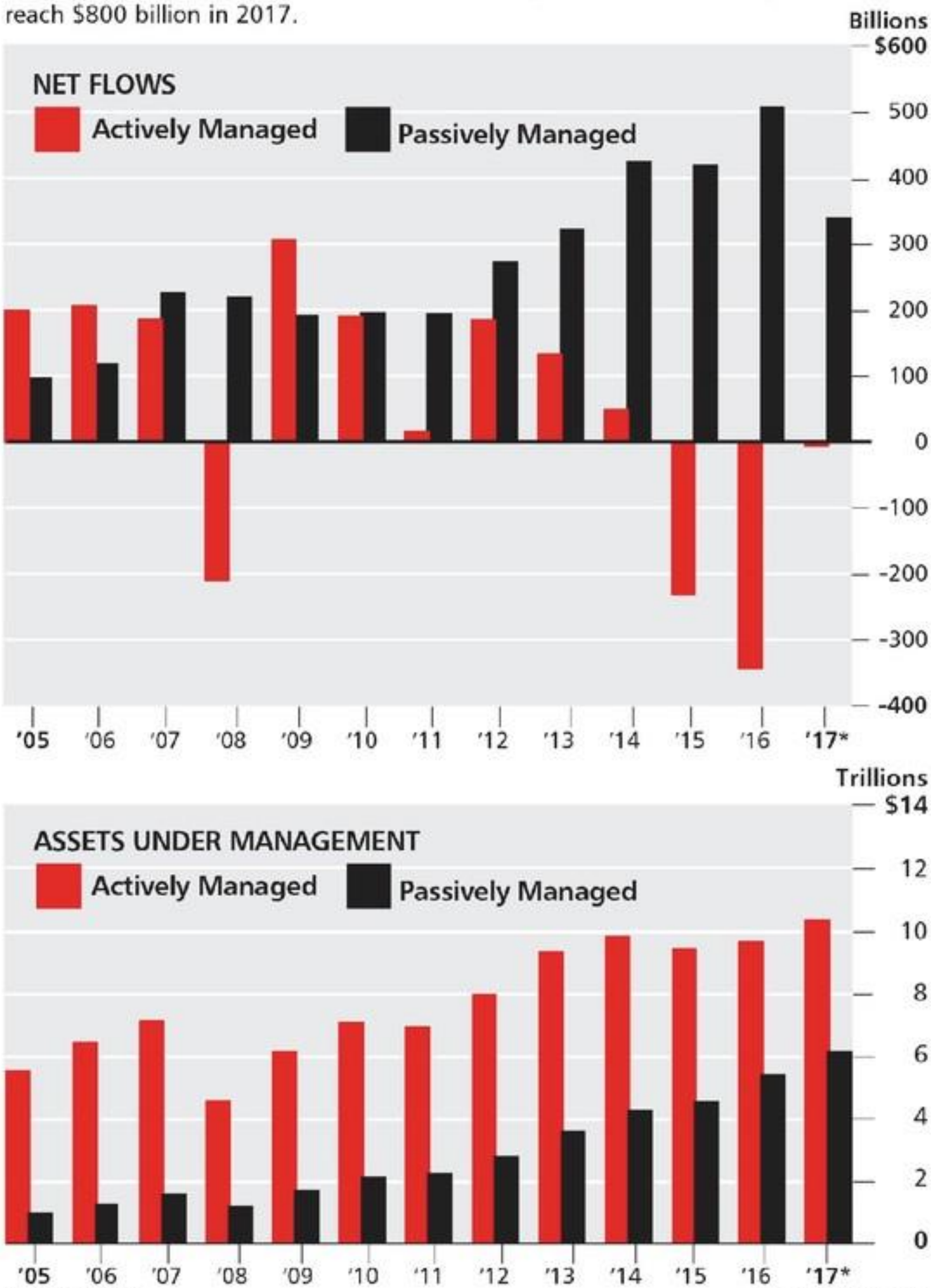
How is this boom in index products affecting the stock market? The question is especially pertinent these days, as benchmarks such as the Standard & Poor’s 500 index and the Nasdaq Composite nuzzle serial new highs, and actively managed funds struggle to keep up. This has fired up an active-versus-passive debate that has become as enduring as Federer versus Nadal, as divisive as Democrat versus Republican.

There's no question who's winning the popular vote. Investors have been pulling money from active funds and plowing it into their passive peers. Through the first five months of this year, investors steered $338 billion into passive mutual funds and ETFs—that's on top of last year's record inflows of $506 billion, according to Morningstar. If this pace keeps up, passive funds could take in more than $800 billion in 2017, a 60% jump from 2016's record and nearly double the haul from 2015.

Most of the attention around this trend has been devoted to the underlying investment philosophy—whether investors are better off with low-cost, broad-market indexes or active stock-picking. Some ETFs have presented investors with a hybrid approach, known as "smart beta," though it's really just old-school quant investing: These ETFs take active strategies, choosing stocks based on certain metrics or fundamentals, and create a formula that forms the basis of an index. Indexes, therefore, are no longer slices of the market, though they are still passive investments. But the active/passive debate has obscured the bigger issue: What does the indexing boom mean for the long-term health of the stock market—and the investors who rely on it?

AND THE WINNER IS...

Active funds still manage more assets, but passive funds' haul has grown much faster—by 180 times since 1993. Net flows into passive funds are on pace to reach $800 billion in 2017.



Through 5/31/17

Source: Morningstar

Passive and quantitative strategies now account for 60% of equity assets, up from less than 30% a decade ago, says Marko Kolanovic, JPMorgan's global head of macro quantitative and derivatives research. By his estimates, just 10% of trading volume originates from fundamental discretionary traders. Last year, four of the five most heavily traded securities were ETFs; Bank of America (ticker: BAC) was the lone stock to make the list. Vanguard Group now owns a 5% stake or more in 491 S&P 500 stocks, up from 116 in 2010, according to Bank of America Merrill Lynch. There's no question that passive funds have a place in the market; the problem is if they *become* the market. When money pours in, passive funds must buy stocks in the same proportion as the indexes they track—with no regard for stock price or fundamental information. Therein lies the conundrum: Indexing works because it can piggyback on the wisdom of the crowd, but its very rise shrinks the crowd whose decisions help make the market.
Jim Grant, founder of Grant's Interest Rate Observer, recently tallied the assets held by price-insensitive buyers. His partial list counts global central banks, ETFs, and indexed mutual funds, and has already surpassed $21 trillion.

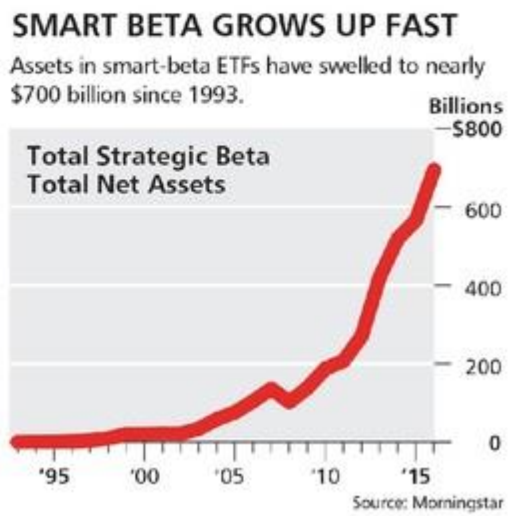
AT WHAT POINT does passive investing distort or destabilize the market? That threshold is hard to pinpoint—except in hindsight, and by then it may be too late. In Japan, 67% of assets under management are in passive strategies, yet the market still seems to function. Some argue that passive, at 37% of U.S. fund assets, is too small to affect the market. But that sounds like wishful thinking, and it echoes the argument prevalent a decade ago that subprime, at 23.5% of mortgage originations in 2006, was simply not big enough to affect the housing market, let alone the financial system.
Mike O'Rourke, Jones Trading's chief market strategist, says the exceptionally easy financial conditions created by central banks damped volatility and paved the way for indexes' liftoff. "The nearly decadelong period of unconventional accommodation created a rising-tide environment where investors can outsource their decision-making to the S&P index committee," he says. "Computer trading and quant models grew up in this very forgiving environment," and the combination of computing power and data history matured to a level that allowed widespread implementation.

On top of that, trading volume declined after the financial crisis and even today is about 30% lower than in 2009, O'Rourke says. Passive funds' growth against lighter volume further magnified their influence. Today, "it's much harder and takes much longer for fundamental views to prevail in the market," he says. "But as monetary policy normalizes, the market will slowly regain parts of its old behavior."

Aaron Brask, a former Barclays strategist who now runs his own investment management firm, sees parallels between today's blind buying and events leading to the credit crisis. Back then, the crowded trade was buying credit products blessed by rating agencies, never mind the quality of the mortgage securities or the rating agencies' conflict of interest. "When investors stopped conducting their own due diligence and started relying on rating agencies, it opened the door for capital misallocation, and ultimately culminated in the credit crisis," Brask says.

FOR INDIVIDUAL INVESTORS, indexing offers many advantages. It's a cheap, easy way to bet on any market sector or theme, without worrying about picking the wrong stock. But these advantages come with risks that are easy to forget, especially in a bull market. With cap-weighted indexes, index buyers have no discretion but to load up on stocks that are already overweight (and often pricey) and neglect those already underweight. That's the opposite of buy low, sell high. "By definition, index funds also guarantee that you will suffer 100% of the next bear market's decline," notes James Stack of InvesTech Research. The same risk management that causes active managers to underperform in a bull market can lessen the pain of a correction, but passive funds have no option to hoard cash or diversify. Stack found that the Vanguard Total Stock Market Indexfund (VTSMX) took 43 months to recover its losses after the 2000 bear market. In comparison, InvesTech's model portfolio, which didn't fare as well during the bull market, took just 11 months to bounce back.

Savita Subramanian, an equity strategist at Bank of America Merrill Lynch, has extensively studied the impact of passive strategies. She found, for instance, that buying the 10 stocks most underweight by active funds, while selling the 10 that are most overweight by active funds, earned annualized returns near 19% since 2008. Active funds are lagging behind passive funds, and "every time they see redemptions, they're forced to sell overweight stocks to raise cash," Subramanian says. Such "crowding risk is particularly acute at quarter end, when allocators tend to rebalance."



Also, companies with the highest crop of shares held by passive funds are becoming more volatile, since heavy passive ownership shrinks the float of shares available to other investors. "When you buy big stocks that are in many indexes, you tend not to worry about liquidity," Subramanian says, "but they may not be as liquid as you think."

Subramanian compared the 100 stocks most widely held by passive investors, and found these have a "true float" of 81.5%, versus an average 85.2% for all stocks. As a result, those 100 stocks had historical volatility near 24.5% (versus 20.9% for all stocks) and saw maximum price declines of 30.3% (versus 23.7% for all stocks).

THERE ARE OTHER WAYS in which market liquidity can become distorted. Consider this example from a 2015 study by S&P Capital IQ: Exxon Mobil(XOM) makes up 1.67% of the S&P 500's weight, more than five times that of a smaller company like Netflix (NFLX), at 0.3%. Yet Netflix has more-liquid shares. This means Exxon could see index-driven share buying or redemptions five times bigger than Netflix's, which could trigger price swings in the less-liquid stock. "A structural problem may arise when the liquidity demanded by the ETF exceeds the liquidity available to some of the underlying holdings," notes S&P Capital IQ. Normally, that effect is muted. But in a liquidity crisis, it can become magnified.

Even Vanguard founder Jack Bogle, who launched the world's first index fund in 1976, warns that ETFs' impact on stock trading "has reached mammoth proportions." In 2016, for instance, the dollar volume of trading in the 100 largest ETFs reached $13 trillion, only slightly less than the trading in shares of the 100 biggest stocks. Yet the market cap of those ETFs was just $1.6 trillion, a mere fraction compared with the $12.8 trillion market cap for stocks. This has resulted in annualized turnover of 120% for stocks, but nearly 880% for the ETFs. Bogle warns that the implications of this rapid trading in ETFs "have yet to be fully examined."

When an Aug. 24, 2015, flash crash halted trading in almost 20% of U.S.-listed ETFs, stock traders blamed ETFs, while ETF traders pointed the finger at stocks. This is like "blaming the driver in front of you for slamming on his brakes while you were tailgating," notes Andy Martin of 7Twelve Advisors. The frustration: "We sense there are potentially lethal connections between these various components, but fear that when we see how they behave under extreme stress, it will be too late."

Of course, what many bemoan as the demise of active managers really is just the demise of lousy active managers. Once upon a time, most New York Stock Exchange stocks were owned by individuals who took their advice from swashbuckling brokers who may or may not have done their homework. It was easier to beat the market with fundamental analysis and a shrewd understanding of human crowd behavior. That spawned a generation that crowded into business schools who wanted to become money managers, but it also sired managers who weren't up to the task. The economist Eugene Fama once said he'd like to compare stockpickers to astrologers, but he didn't want to bad-mouth astrologers.

All that changed with computers, institutionalized trading, and the information age. Now, the smart kids want to work for Google, and even on Wall Street, it's the geeks fluent in quant who collect the big bonuses.

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Laurence B. Siegel, director of research at the CFA Institute Research Foundation, found that risk-management strategies like holding cash or diversification did not fully explain active funds' underperformance from 1992 to 2017. To gauge how robots might fare against human stockpickers, he looked at a benchmark comprising the bottom 30% of U.S. large-cap stocks by price-to-book valuations, because that's what the world's dumbest robot might use to start a value fund. To his surprise, the dumb-robot benchmark outperformed the equal-weighted composite of active value funds. "A majority of active managers did not make decisions that were easy enough that a robot could make them," Siegel writes.

AT WHAT POINT do we say that passive's rise might be distorting the market? "The canary in the coal mine is when you see the better active managers starting to really beat the market," says John Rekenthaler, Morningstar's vice president of research. "Then we can say pricing mechanisms may be breaking down, and the market is becoming inefficient."
We may be getting close to that point. The flight from active shows signs of slowing: Investors yanked a record $343 billion from active funds last year, but so far this year, the exodus has shrunk to just $6 billion. June marks the fourth straight month when more than half of large-cap managers beat their benchmarks—the longest such streak since at least 2009, according to BofA Merrill Lynch.

Martijn Cremers, a University of Notre Dame professor who has closely studied active managers, found that they're becoming even more active in their stock-picking in response to the passive onslaught, essentially by building portfolios that are more differentiated from the benchmarks. Stock-picking by these active managers, he says, is also becoming "more successful—consistent with the notion that stock-picking opportunities increase if there is more passive investing."

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