Since their introduction in the mid-1990s, exchange-traded funds have become popular investment vehicles due to their low transaction costs, intraday liquidity and tax efficiency. By mid-2016, they represented roughly 10% of the market capitalization of securities traded on U.S. stock exchanges. Also by mid-2016, ETFs owned about $1.35 trillion of the U.S. stock market, compared with the approximately $6.8 trillion owned by mutual funds. And ETF daily trading volume exceeded 36% of overall stock market trading volume in the first half of this year.

Itzhak Ben-David, Francesco Franzoni and Rabih Moussawi, authors of the October 2016 paper "Exchange Traded Funds (ETFs)" (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2865734), provide a valuable contribution with their survey of the literature on the impact of ETFs on markets.

In the first part of their paper, they describe how ETFs work and what distinguishes them from other pooled investment vehicles. It serves as a good, short primer for investors not familiar with the creation and redemption process. The authors demonstrate how the redemption/creation process and arbitrage work as two mechanisms to keep ETF prices from diverging far from the value of their underlying securities.

Effects Of Indexing

The second part of the paper describes the rise of passive investment and the role that ETFs play in the passive asset management space, which has been persistently gaining market share from active managers. While there are active ETFs, they constitute less than 2% of AUM in the ETF market.

The authors note that, at least in theory,
active management benefits from exploiting the noise in prices created by uninformed retail traders. So, in equilibrium, the remainder of capital is invested in passive funds, and thus the increase in passive investment indicates that arbitrage opportunities shrink or disappear. This serves as an indicator that the market is becoming more efficient.

My co-author Andrew Berkin and I present the evidence supporting this view (as well as provide evidence and logic behind other explanations also leading to the conclusion that markets are getting more efficient) in our book, "The Incredible Shrinking Alpha (https://www.amazon.com/Incredible-Shrinking-Alpha-Escape-Clutches-ebook/dp/B00S9UKXN2)."

However, Ben-David, Franzoni and Moussawi note that not all researchers share the view that the rise of passive asset management is an indication of improved market efficiency. Others have warned there are adverse effects to rising indexation, including that indexing can create distortion in securities’ valuations, such as inclusion and deletion effects, the increasing co-movement of securities within an index and higher sensitivity to crashes.

The authors also note that a parallel trend in the marketplace over the last few decades is an increase in concentration in the asset management space, with a likely explanation being the economies of scale that make consolidation attractive. They observe that some have argued that ETFs are poor at corporate governance. Consequently, private firms are reluctant to list on stock exchanges because passive investors—and primarily ETFs—slow price discovery and may eventually jam value signals to managers.

However, Ben-David, Franzoni and Moussawi present evidence that contradicts such claims. For example, they discuss a study that found when a stock moves from being at the bottom of the Russell 1000 Index to the top of the Russell 2000 Index, a sharp increase in institutional ownership occurs, primarily among passive indexers. That study found that, as ownership by index funds increases, firms become more transparent in their reporting.

Another study the authors discuss also found positive effects of increased ownership by passive investors on corporate governance, including the removal of poison pills, restrictions on shareholders’ ability to call special meetings, fewer dual-class share structures and more independent directors. One interesting finding that Ben-David,
Franzoni and Moussawi address comes from a study showing that retail traders who invest in ETFs perform worse than retail traders who stick with traditional mutual funds. The authors of that study argued that the ease of trading with ETFs leads retail investors to attempt to time the market. Because retail investors have been shown to be bad traders in general, this behavior results in poor performance.

Information Efficiency And Liquidity

The third part of Ben-David, Franzoni and Moussawi's paper focuses on how ETFs affect information efficiency in financial markets. The authors note that while not all researchers agree, studies have found stocks incorporate information more quickly once they are in ETF portfolios.

Studies have made the case that some of the aforementioned increase in co-movement in the prices of stocks within an index (which has been documented by other financial researchers) can be explained through better incorporation of systematic information into stock prices. In an opposite direction, ETFs may decrease the liquidity of their underlying securities. Specifically, because ETFs provide an inexpensive way to trade illiquid assets, they can crowd out traders from the underlying assets and detract liquidity.

For example, one study found that the introduction of corporate bond ETFs leads to a decrease in the liquidity of the underlying bonds, suggesting a crowding-out effect. Another interesting finding is that studies have concluded that equity volatility increases substantially following an increase in ETF ownership.

A related finding the authors address was that serial correlation of stock markets became more negative following indexation, with the argument being that index products impound nonfundamental shocks (which then revert) into the underlying security prices.

Ben-David, Franzoni and Moussawi also examined the literature on ETFs during periods of market turmoil. The concern is that during market turbulence, market makers and arbitrageurs cease intermediation activities because they do not have reliable pricing information. As a result, their absence can lead to illiquidity in the underlying securities, the amplification of shocks, and their transmission to other assets.

The evidence shows that ETFs have, in fact, displayed a high level of illiquidity during times of market turbulence. And importantly, liquidity shocks travel across...
assets because they are informationally connected.

**Summary**

Ben-David, Franzoni and Moussawi concluded: "ETFs are perhaps the financial innovation that has had the greatest impact on financial markets in the first decades of the 21st century. These investment vehicles offer a combination of the features that have not been available to investors before: low cost transactions, intraday liquidity, and passive index tracking. The rise of ETFs is part of a wider process that has taken place in the asset management industry over the last three decades: passive management has expanded, while at the same time the asset management landscape has become more concentrated."

They added: "On the one hand, researchers have found that ETFs allow information to be more efficiently impounded into security prices. On the other hand, mounting evidence indicates that securities prices have become noisier since the introduction of ETFs. It is possible that both phenomena are taking place in parallel: security prices impound information more efficiently once they are included in ETFs' baskets and, at the same time, become more volatile due to non-fundamental reasons."

Finally, the authors also warn: "There is a concern that ETFs provide a false sense of liquidity, where they are liquid at normal trading environment. However, at turbulent times, liquidity dries up since authorized participants (those who create and destroy ETFs) and arbitrageurs stay out of the market. The effect could be exacerbated if the presence of ETFs crowds out liquidity from the underlying assets (e.g., corporate bonds)."

Larry Swedroe is the director of research for The BAM Alliance (http://thebamalliance.com/), a community of more than 140 independent registered investment advisors throughout the country.
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As Of Dec. 29, 2016

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**DAILY ETF WATCH**

[sections/daily-ETF-watch/HTML](/sections/daily-ETF-watch/HTML)

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**ETF League Table As Of Dec. 27, 2016**


BlackRock and SSgA ETFs saw the largest net inflows on Tuesday, Dec.

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