

EQUITY EXCHANGE TRADED FUNDS (ETFs) AND THEIR IMPACTS ON EQUITY MARKETS

Tremendous growth in ETF assets over the last decade has led to debate over whether ETFs are impacting broad markets and the underlying individual securities held by ETFs. Examining the reasons behind the growth and the mechanics of ETFs, however, we find that ETF markets look sound and likely have limited impact on underlying equity securities.

INTRODUCTION

Tremendous growth in ETF assets over the last decade has led to debate over whether equity ETFs are impacting broad markets and the underlying individual securities held by those ETFs. These potential impacts include price pressure, valuation distortions, increased correlations amongst securities held by ETFs, and heightened volatility.

Various studies, including our own analysis, have examined these potential impacts on equity markets directly, and we have yet to see compelling evidence that ETFs have materially negative side effects. To understand why, we believe it is important to first understand the current market landscape for ETFs and place their rapid growth and structural characteristics in context of the broader market.

ANALYSIS OF ETF MARKET GROWTH

The ETF Industry is Snowballing, but the Mutual Fund Industry Remains a Glacier.

While the increased popularity of ETFs over the last decade has surely brought in new assets under management (AUM) for ETFs, not all ETF flows over that time period constituted new capital injected into markets. Significant assets appear to have been transferred from existing actively-managed mutual funds.

Figure 1 illustrates that cumulative net inflows into U.S.-listed index mutual funds and equity index ETFs (“passive funds” collectively) have been similar in size and trend to the net

outflows from U.S.-listed, actively-managed mutual funds (“active mutual funds”) since 2008. This suggests investors are migrating from active mutual funds to passively-managed investment vehicles, and it is fair to assume that a significant portion of the active mutual fund outflows have gone to ETFs.

When assessing the impact of flows from active mutual funds to passive ETFs, we would first point out that there is significant overlap in the security ownership of the actively-managed mutual funds and the passive ETFs. Many active mutual fund managers benchmark to the same indices that many passive ETFs track. Even allowing for active positioning in active funds, security ownership between these vehicles can be very similar, particularly if you look at these funds in aggregate. So, while ETF inflows have been robust in recent years, the similar-sized outflows from active mutual funds with similar aggregate holdings mean the net impact on valuation of individual securities held by the funds and ETFs should be minimal.

ETF DEMAND ISN'T ALL NEW EQUITY DEMAND:
Many of the assets flowing into ETFs have come from mutual funds with similar aggregate holdings, which limits the likely net impact of ETF asset growth on underlying equities.

Additionally, while the growth in ETF assets has been rapid in recent years, ETF AUM remains small relative to mutual fund AUM. The combined AUM of U.S. ETFs stood at about \$3.3 trillion as of December 2017, less than one fifth of the size of U.S. mutual fund AUM (see Figure 2).¹ This size differential in

FIGURE 1: CUMULATIVE FLOWS FROM ACTIVE FUNDS TO PASSIVE FUNDS AND ETFs

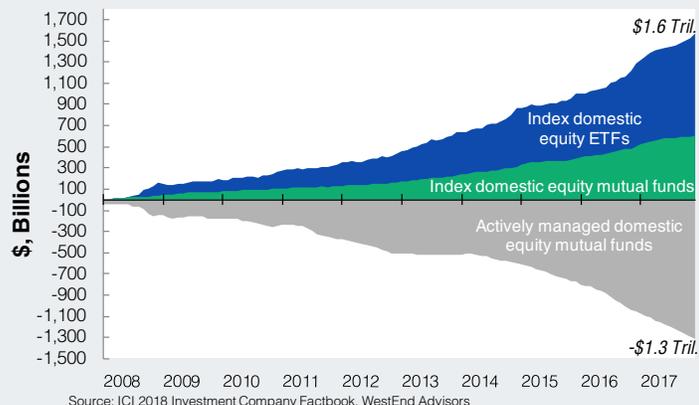
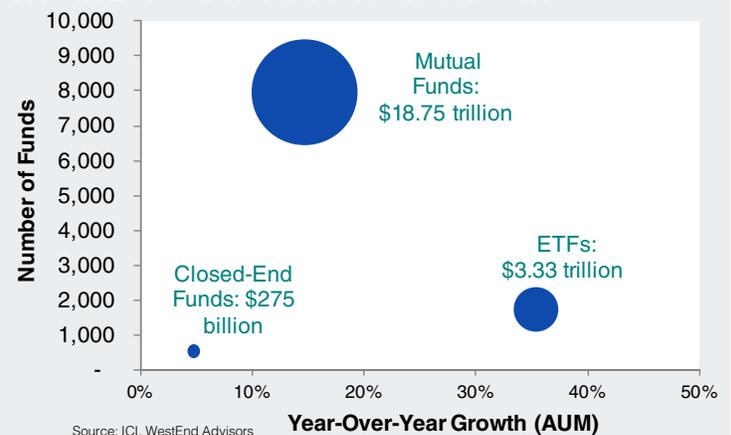


FIGURE 2: FUND AUM AND ASSET GROWTH



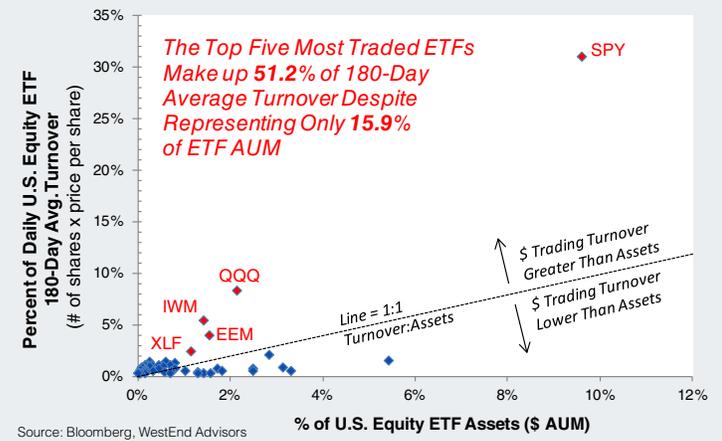
AUM suggests that there are limits to the impact ETF trading might currently have on underlying markets relative to other factors. However, as discussed in the next section, ETF AUM growth has been eclipsed by even faster growth in ETF trading volume, so it is also important to consider trading separately.

ETF Trading Has Boomed

Along with their AUM growth and popularity, ETFs have become a significant portion of equity market trading activity. ETF trading turnover (shares traded multiplied by share price) exceeded 30% of overall U.S. stock market trading turnover in 2016, despite ETFs capitalization accounting for only about 10% of stock market capitalization.²

It is worth noting that a large portion of aggregate ETF trading comes from a very limited number of ETFs. For example, using 180-day average turnover to measure equity ETF trading activity, we discovered that the five most-heavily traded equity ETFs in mid-2018 comprised 50% of the aggregate turnover for 1,491 ETFs that are listed in the U.S. (The most actively traded equity ETF, SPY (SPDR S&P 500 ETF Trust), comprised 31% of aggregate trading activity). Figure 3 puts these statistics into visual form and highlights SPY as a significant outlier.

FIGURE 3: MANY ETFs ARE TRADING VEHICLES



Even if we exclude the five most heavily-traded U.S.-listed ETFs—which include SPY, QQQ (PowerShares QQQ Trust), EEM (iShares MSCI Emerging Markets ETF), IWM (iShares Russell 2000 ETF), and XLFF (Financial Select Sector SPDR Fund)—the rest of the U.S.-listed equity ETF universe still makes up approximately 22% of overall stock market turnover (instead of the 30% referenced previously). This is more in line with what one might expect considering ETF assets represent about 10% of the U.S. equity markets, but still suggests ETFs collectively trade more frequently than stocks in the U.S. According to data from 2015, the average holding period for ETFs was approximately 30 trading days.³ This compares to the average holding period for the 100 largest stocks, which was just over 200 trading days.^{3,†}

† Mutual fund holding periods are more difficult to determine, but it is fair to assume that mutual fund holding periods are longer than that of ETFs simply because mutual funds do not trade intraday.

How Should We Think About High ETF Trading Volume?

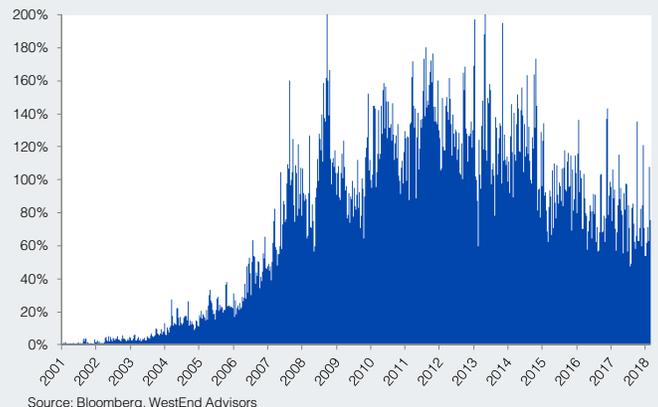
Unlike mutual funds, ETFs offer intraday liquidity, which naturally allows for higher trading volume than mutual funds. However, high aggregate trading volume for ETFs in general (and particularly for a few popular index-based ETFs) does not necessarily suggest ETFs promote dangerous trading activity.

A large portion of daily ETF volume is attributable to arbitrageurs and liquidity providers. For example, according to some industry participants, statistical arbitrage accounts for 50% of the volume in the S&P 500 SPDR (SPY)⁴. This sort of trading can serve to keep ETF prices in line with net asset values (NAV) throughout the day, and does not represent frenzied, speculative trading. In fact, bid-ask spreads are often tighter for ETFs than underlying individual equities, and liquidity is sometimes higher for ETFs than the underlying securities.

LIQUIDITY STRENGTHENS MARKETS:
A large portion of ETF trading volume comes from a few big ETFs due to liquidity providers and arbitrageurs, which should help keep ETF prices in line with underlying security values rather than distorting underlying security values.

Also, about 90% of ETF turnover occurs on the secondary market, which simply represents buyers and sellers transacting with one another for ETFs on a stock exchange, just like they would for a single stock.^{5,‡} ETFs' intraday tradability on secondary markets give these investment vehicles derivative-like characteristics. Because ETFs, like equity index futures, allow traders and investors to take on (or offset) broad equity index exposure without trading directly in a reference index's underlying constituents, ETFs can have higher volumes than the reference equity index. For example, IWM tracks the Russell 2000 Index and is the 3rd most frequently traded ETF (as seen in Figure 3). As Figure 4 illustrates, since 2004, IWM daily turnover has grown from less than 20% of the daily turnover of the Russell 2000 Index to at times more than 100% of the turnover of the Index.

FIGURE 4: IWM ETF DAILY TURNOVER AS A % OF RUSSELL 2000 INDEX DAILY TURNOVER



‡ The other 10% of ETF trading is accomplished through the create/redeem process.

With the growth in ETF assets and their relatively short holding periods, ETF secondary-market trading has become a large percentage of daily equity exchange volume. In short, ETFs trade frequently because they provide market participants quick, cheap and liquid access to various broad markets, intraday.

Is ETF trading frequency, which is greater than that of mutual funds and individual stocks, impacting markets? Further comparison with the equity futures market helps put ETF secondary-market turnover into context.

According to KCG (since acquired by Virtu Financial), a market-making firm, U.S. equity futures trade on average over \$250 billion a day, more than 3x the turnover of ETFs and much more than the turnover of underlying stocks. In this light, if ETF trading

WHY FEAR ETFs IF NOT FUTURES?

ETFs, as market tools, share some key traits with equity futures, but futures have over three times the trading turnover of ETFs and, yet, there is little evidence that futures have any sustained negative impact on underlying equity markets.

turnover was responsible for moving markets and individual securities, futures contracts on the S&P 500 and the Russell 2000 should be under even greater scrutiny.

While futures markets are currently more heavily traded than ETF markets, based on the notional value of the futures contracts, one of the

reasons why ETFs have gained popularity is that ETFs can provide liquid, cost-effective equity market exposure very similarly to futures. In fact, sometimes ETFs are a better proposition than futures for investors and traders. Depending on the ETF and the investor's or trader's holding period, ETFs can be cheaper, unlevered (purchasers of futures contracts typically are 10x-20x levered), and more flexible (there is a much greater variety of indices covered by liquid equity ETFs than equity futures).

To put it simply, there are many instances when ETFs are a safer and better alternative to futures, and ETFs are more easily accessible to individual investors in addition to major institutions.

SUMMARY OF ANALYSIS

ETF assets and ETF trading volumes continue to grow at a rapid pace relative to other investment funds. In 2017, inflows for ETFs and similar exchange-traded products totaled \$633 billion. This level of growth alone has led some investors to issue warnings about ETFs. We believe, however, that understanding the risks associated with ETFs and the impact of ETFs on equity markets requires looking beyond the headline growth, as we have done.

In this paper, we used specific data to highlight three key points:

- 1) Not all ETF inflows constitute new capital injected into markets. A significant portion of ETF inflows represent assets transferred from existing mutual funds. This transfer of assets from mutual funds to ETFs helps refute the claim that ETF AUM growth has caused asset bubbles. Additionally, mutual funds still collectively have higher AUM, which represents a higher percentage of individual stock shares than ETFs, and the relative size differentials are important to recognize when analyzing ETFs' impacts on markets;
- 2) Equity ETF industry trading statistics can be misleading due to very high turnover in a small number of very liquid equity ETFs as well as high amounts of statistical arbitrage trading which effectively keeps ETF prices in line with NAVs;
- 3) Intraday trading characteristics of ETFs promote higher turnover and more trading activity than mutual funds, but the attributes of ETFs (e.g., liquidity) are not entirely new to investors and traders. For example, many investors and traders now use equity ETFs instead of equity futures in order to gain equity market exposure. We also found that ETFs are much less leveraged compared to futures, and that ETFs offer the potential for much more customized exposure than is available through futures markets which only track a handful of equity indices.

ETF AUM and trading growth has been remarkable and, while this strong growth deserves scrutiny, equity ETF markets look sound when we identify the reasons behind the growth.

WestEnd Advisors Investment Team

August 28, 2018

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 2. Ben-David, Franzoni, and Rabih Moussawi, 2016, Exchange Traded Funds (ETFs), Submitted to the *Annual Review of Financial Economics*, 2017, Volume 9, 4.
 3. Joanne M. Hill, 2016, The Evolution and Success of Index Strategies in ETFs, *Financial Analysts Journal* 72 (5), 11.
 4. Ben-David, Franzoni, and Rabih Moussawi, 2015, Do ETFs Increase Volatility?, 9, <http://falphaville.ft.com/blog/2009/07/30/64451/statistical-arbitrage-and-the-big-retail-etf-con/>.
 5. Investment Company Institute, 2016 Investment Company Fact Book, 67.

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The Standard and Poor's 500 Stock Index includes approximately 500 stocks and is a common measure of the performance of the overall U.S. stock market. The Russell 2000® Index measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. An index is unmanaged and is not available for direct investment.

DISCLOSURE UPDATE: On December 31, 2021, Victory Capital Holdings, Inc. ("Victory Capital") acquired WestEnd Advisors, LLC ("WestEnd"). WestEnd, an SEC-registered investment adviser, operates as an autonomous Victory Capital Investment Franchise. WestEnd's active principals continue to be responsible for managing the firm and its day-to-day operations.