

Boyar's Index Orphans



Introduction: Index Orphans

“ETFs as a concept and passive investing as a concept by their very nature make the market less efficient. Efficient market theory says that millions of people doing research following every movement of every company is how they come close to predicting earnings. If you are buying an ETF or passive investment in an index, you are not doing that kind of research. ETFs and passive investments by their very nature are beginning to build inefficiency in the market and that I don’t believe will be resolved happily.”

– Art Cashin, UBS

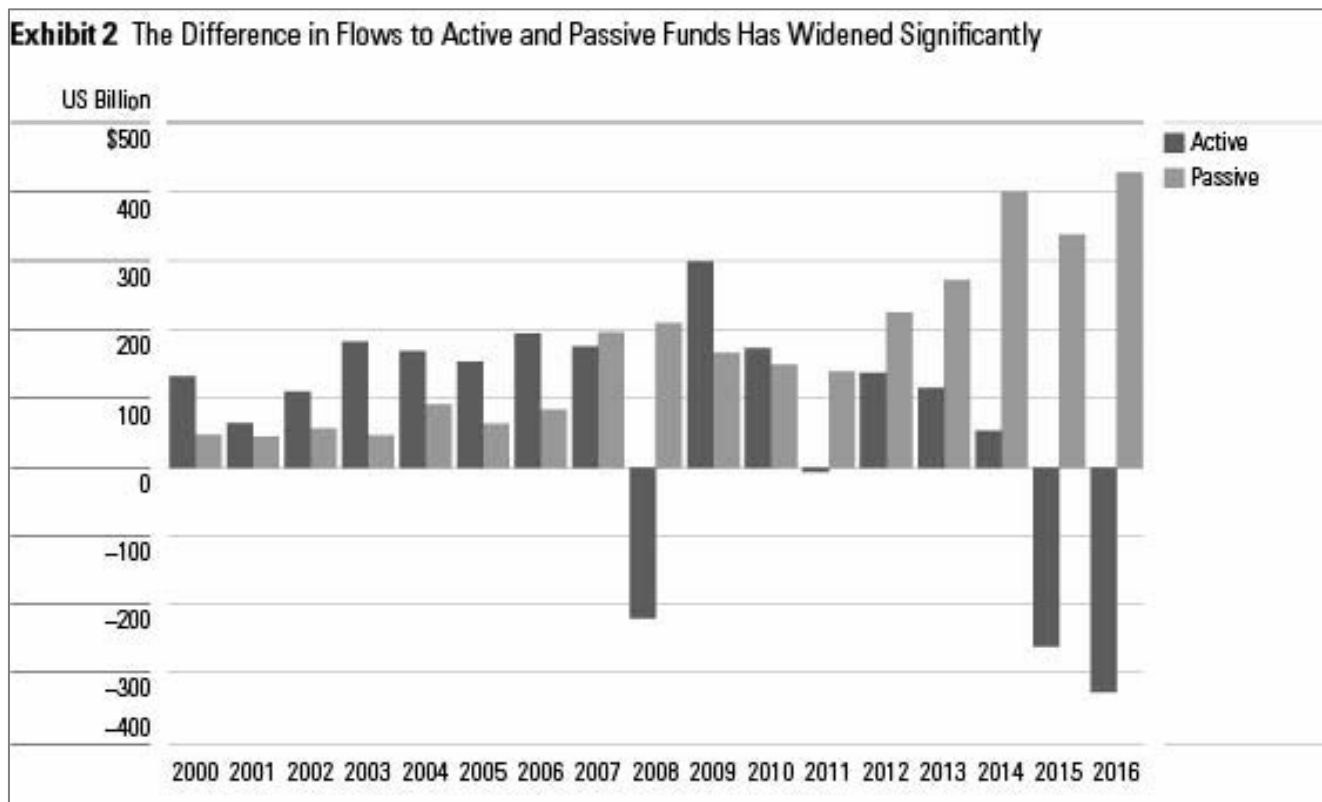
As our longtime readers are aware, we typically devote the pages of this publication, which we previously referred to as our Summer Issue (we now refer to this publication as our Thematic Piece due to our new publication schedule), to an out-of-favor industry or other timely topic. Over the years, a number of our profiles of out-of-favor industries have proven particularly opportune, including our examinations of housing in 2011, retailers with large real estate ownership in 2004 (4 of the 5 profiled retailers were subsequently acquired), and cable/satellite distribution and entertainment in 2002. Meanwhile, timely topics have included, but certainly have not been limited to, profiting from uncertainty (2016), conglomerates (2014), bond-like equities (2010), spin-offs (2007), and companies with supervoting share class structures (2005).

Although all of the major market averages are currently at or near all-time highs, it is not that hard to identify an out-of-favor industry in today’s bifurcated market, which is being led upward by the so-called FAANG stocks (Facebook, Apple, Amazon, Netflix, Google/Alphabet). Through the first 9 months of 2017, stocks that constitute the S&P 500 Information Technology sector were up 27.4%, compared with a gain of 14.2% for the S&P 500 as a whole. At the other end of the spectrum, a number of sectors and industry groups are facing challenges. Notably, two S&P 500 GICS sectors have posted negative returns for the first three quarters of the year: energy (-6.6%) and telecom services (-4.7%). Meanwhile, a number of industry groups within the S&P 500 are down significantly from their recent highs even as the GICS sectors in which they are categorized have posted positive performance. Over the past year (through 9/30/2017), approximately 55% of the S&P 500’s ~60 industry groups underperformed the S&P 500, which posted a 17.9% return over that time frame. A few of the out-of-favor, if not controversial, industries in today’s market include multiline retail (down ~18% from recent 52-week highs) and broadcast and cable/TV (down 17%). Given the disruption taking place in these aforementioned industry groups (cable networks from OTT distribution, retail from Amazon), it’s not an easy task determining whether the current headwinds facing these industries are temporary or secular.

Accordingly, we approached the task of coming up with a topic for this year’s issue in a slightly different manner. Rather than seek out an out-of-favor industry or timely topic, we thought it would be value added to identify a way for active managers to benefit from one of the key trends that has been going against them for several years: the flow of assets from active strategies to passively managed vehicles. Our curiosity led us to examine U.S. publicly traded securities that are not included in key S&P indices (S&P 500, S&P Mid Cap 400, S&P Small Cap 600) and that have a low ownership in passive products such as index funds and ETFs. In our view, these so-called “index orphans” have likely been left behind, in part, by a combination of strong inflows into passive products and outflows from active managers.

During 2016, inflows into passively managed products (index funds and ETFs) totaled \$426 billion in the U.S., while actively managed funds experienced outflows totaling \$326 billion, according to fund industry researcher Morningstar. Although these fund flow trends have been occurring for a number of years, the magnitude of the spread between active and passive investing in 2016 was the greatest on record.

Active and Passive Fund Flows Diverging Materially



Source: Morningstar Direct. Date as of 31/12/2016.

Fund flows into index funds and passively managed ETFs generate demand for securities included in their respective indices, boosting valuations and performance—which attracts more fund flows and more buying, creating a self-fulfilling prophecy. Meanwhile, outflows from active managers have contributed to the underperformance of active managers as a whole due to the forced selling of stocks that other active managers may also hold. In a later section, we highlight the valuation discrepancy between index and nonindex stocks, reinforcing our view of the performance challenges created by adverse fund flows.

Approximately 750 publicly traded equity securities have market caps greater than \$1 billion and are also not included in one of the three aforementioned indices, with nearly 60 names boasting market capitalizations in excess of \$10 billion (the entire list will be made available to subscribers in a separate mailing). In identifying names for this year’s issue, we focused on those with passive ownership of less than 18%, a figure that is below the ~22% passive ownership average for stocks included in the S&P 500. It’s not surprising that AAF has profiled 29 of these nonconstituents in recent years, given our philosophy of finding underfollowed and underappreciated businesses. With flows into passively managed products looking like they will continue unabated for the foreseeable future, it’s prudent to ask how these index orphan securities will ultimately be fairly recognized by the market. In our view, there are multiple ways that these securities’ underlying values will be recognized, and we detail these factors later in the report. However, it is worth reminding readers of one of our long-held beliefs: if the public markets do not recognize the disconnect between a company’s share price and its intrinsic value, then someone else (an acquirer) will. This is why a large percentage of all the securities featured in AAF since its inception in 1975 have been acquired after being profiled.

We do not have to remind our readers that when the mainstream media starts to proclaim the end of something (the death of equities, etc.) the sentiment in question is probably at or close to its peak. With many market pundits claiming the death of active management, we believe that investors looking beyond market indices and focusing on individual security selection will be rewarded when investor sentiment changes and active management begins to outperform. While we may be less certain about the recovery/turnaround potential

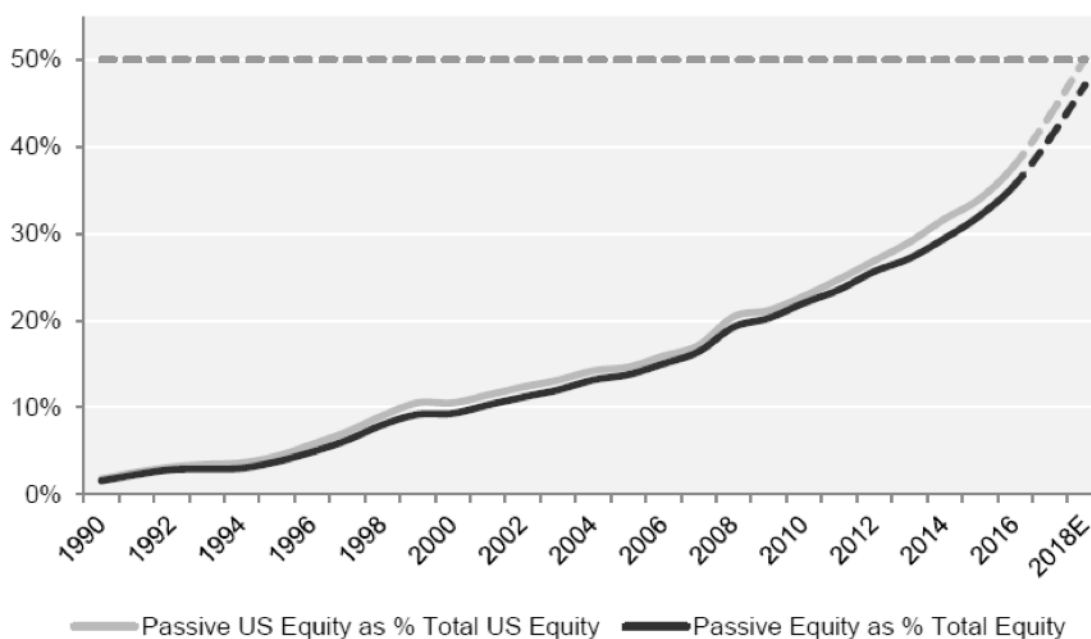
Introduction

of certain industries in today's environment, active management underperformance has proven to be a cyclical phenomenon, and we are fairly certain that active management will demonstrate outperformance in the coming years.

Passive Investing Continues to Attract Fund Flows

The amount of assets invested in passively managed investment products continues to increase. A number of factors are contributing to the growth of passive investing, including increased fee disclosure, investor awareness of active management outperformance (or lack thereof), proposed/pending regulation holding advisors to a new higher standard when managing client assets, and increased traction for roboadvisors. According to the Investment Company Institute, actively managed domestic equity mutual funds have had outflows in every year from 2005 to 2016, while index domestic equity mutual funds and ETFs had inflows in each of these years. As a result of the strong inflows garnered by passive investment strategies, the percentage of equity assets managed within passive strategies has increased from approximately 10% in the late 1990s to nearly 40% today, according to Credit Suisse (which defines all rules-based active management strategies, such as smart beta and other factor-based indexes, as passive).

Percentage of U.S. Equity Assets Under Management (AUM) in Passive



Source: Credit Suisse Asset Manager Research, Simfund, AUM represents US domiciled equity retail funds

Notwithstanding the recent outperformance that active managers have enjoyed since November 2016, the robust flow of funds into passive strategies has proven to be a particularly strong headwind for active managers (especially those who employ a value discipline). Many passively managed products such as index funds and index ETFs are market-capitalization-weighted vehicles and therefore tend to buy more shares of securities that have done well and that thus likely have higher valuations than companies with lower weightings. Clearly, there is not a direct correlation between the absolute weighting of a security in a passive product such as an S&P 500 index fund or ETF and its valuation (e.g. Apple has large weightings in a number of indices and ETFs, but, many observers do not believe its valuation is stretched), but as money flows into index funds, the stocks that have done well are propped up even further, reflecting the “buy discipline” of these fund structures. The discrepancy becomes pronounced during bull markets and is a key contributor to the strong underperformance of active managers (both value and growth) whose portfolios tend to deviate materially from those of the index.

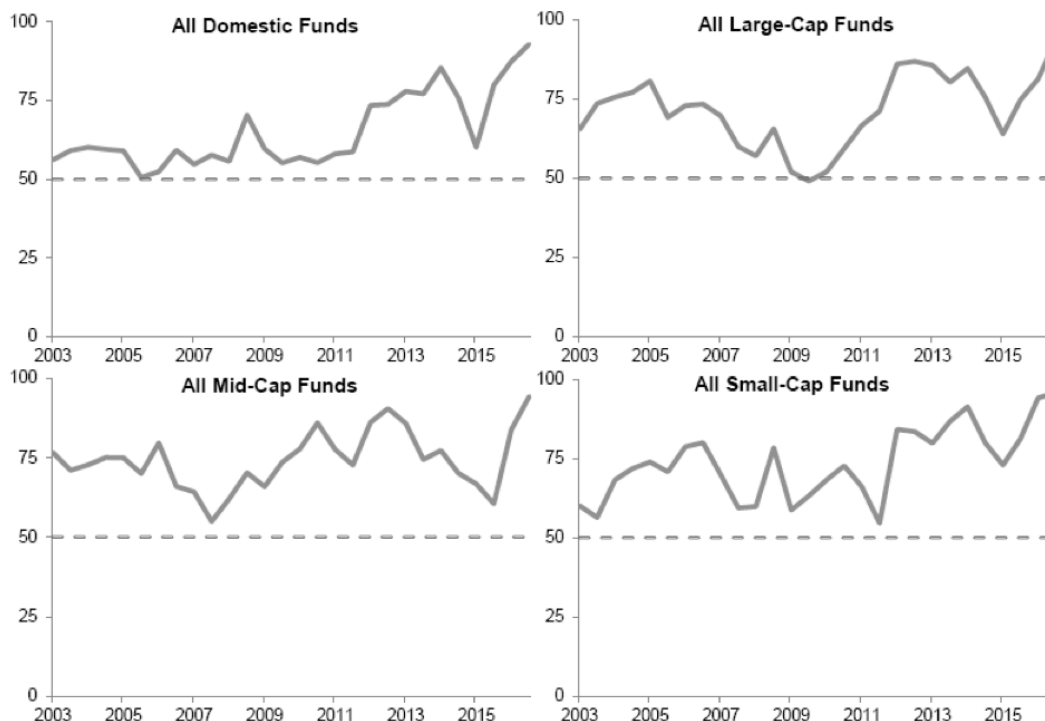
Introduction

Structural Advantages and Disadvantages of ETFs and Passive Investing

Clearly, we are very wary of ETFs and the risks that may be lurking behind the currently calm market. But not all ETFs are created equal, and we would be remiss to dismiss the advantages offered by ETFs/passive investment strategies—particularly as they pertain to the retail investor. These advantages include immediate liquidity (for ETFs of scale), increased access to otherwise difficult-to-access markets (e.g., bonds, emerging markets), reduced trading costs, and tax efficiency. But most important is the lower fee structure that is typical of ETFs compared to traditional mutual funds and other investment vehicles. The average index fund charges just 0.11% annually versus 0.84% for actively managed funds.¹ Many retail investors also pay broker or advisory fees on top of fund fees. Robo advisors fees are typically far below those of the RIA, brokerage, or hedge fund model, and individual investors can easily create a diversified portfolio via ETFs without even using a roboadvisor. Over a long investment horizon, the compounding effect of lower fees on growth in principal is quite dramatic.

An obvious downside to investing in passive, broad market-indexed ETFs is that investors are generally forgoing the ability to generate excess returns. However, in the simplest terms, and putting aside benchmarking issues, by definition the average investor will not outperform the market. In reality, there is annual variability in broad equity market returns achieved by different investor classes (individual direct brokerage vs. institutional, mutual fund vs. hedge fund, etc.). But unsurprisingly, active U.S. equity funds, in the aggregate, have failed to beat their benchmarks over the long term, as illustrated in the following charts. In fact, according to S&P's latest SPIVA Scorecard, an astonishing 92.2% of U.S. large-cap fund managers have trailed their benchmarks over the past 15 years, on an asset-weighted basis.² The figures are similarly poor for mid-cap managers (95.4% underperform) and small-caps (93.2%). Looking back over the past 20 years, at no point have >55% of funds outperformed the market over any 2 consecutive years—even at the height of prior “stock picker’s markets” (e.g., 2000-2002, 2007-2009).

U.S. Active Equity Funds: % Outperformed by Benchmark, Rolling 3 Years



Source: S&P Research

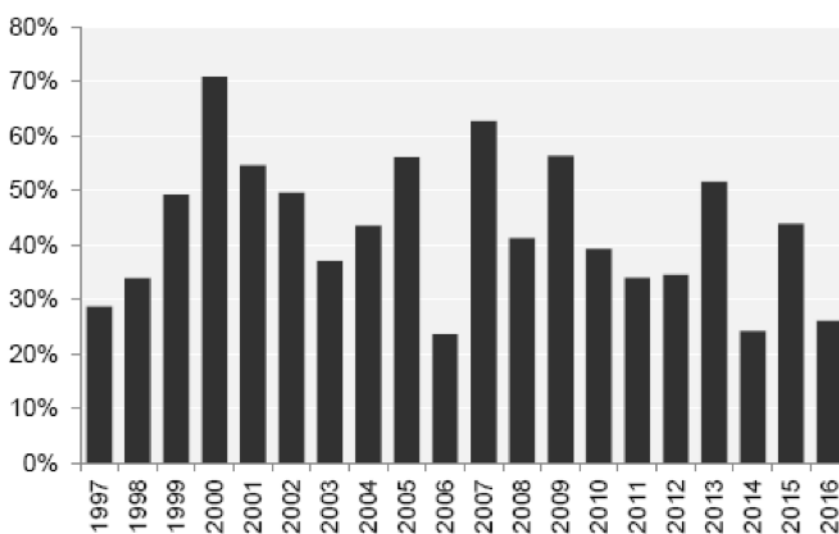
¹ Ky Trang Ho, “How to beat 90% of mutual fund managers in the long run,” *Forbes*, April 12, 2017, <https://www.forbes.com/sites/trangho/2017/04/12/how-to-beat-90-of-mutual-fund-managers-in-the-long-run/#34f286984257>.
² “SPIVA statistics and reports,” *Indexology*, <http://us.spindices.com/spiva/#/reports>.

Introduction

In light of the preceding statistics, it is clear that for the typical investor unskilled in evaluating managers, choosing a fund is a losing bet. At the same time, retail brokerage clients are the most likely candidates to donate negative alpha to aggregate “gross of fees” stock market returns (aggregate mutual fund performance looks more favorable on a “gross of fee” basis). Accordingly, to the extent that retail investors move from stock picking and money manager picking to appropriately chosen ETFs, they may actually be better off. For the skeptical value investors who require a Warren Buffett quote for validation, look no further than his 2016 annual letter to Berkshire Hathaway shareholders:

“If Group A (active investors) and Group B (do-nothing investors) comprise the total investing universe, and B is destined to achieve average results before costs, so, too, must A. Whichever group has the lower costs will win. (The academic in me requires me to mention that there is a very minor point—not worth detailing—that slightly modifies this formulation.) And if Group A has exorbitant costs, its shortfall will be substantial Over the years, I’ve often been asked for investment advice, and in the process of answering I’ve learned a good deal about human behavior. My regular recommendation has been a low-cost S&P 500 index fund.”

U.S. Active Equity Funds: Annual % Outperforming Net of Fees

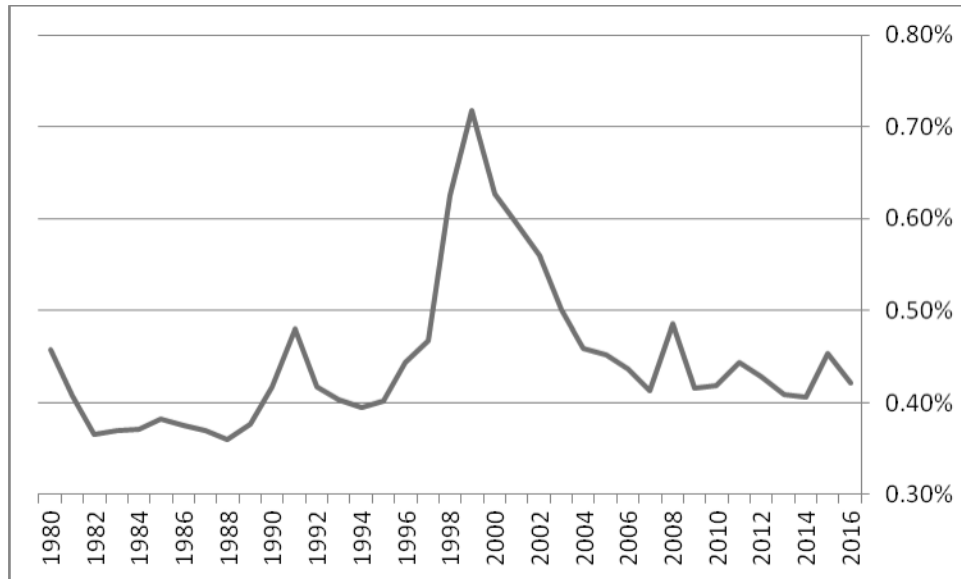


Source: Credit Suisse Asset Manager Research, Morningstar

Are ETFs Driving Market Distortions?

A common concern voiced by market followers is that ETFs are driving market distortions such as herding into the best-performing, highest-valued stocks (e.g., FAANGs). The FAANGs (and more recently the technology sector as a whole) have no doubt been outperforming for years and appear to be attracting dangerous levels of euphoria among retail investors (and some money managers). But how top-heavy is the S&P 500? The current S&P 500 bull market rally has actually been much more broadly based than market pundits appear to believe. Sorted by market cap, the 53 largest companies in the S&P 500 currently comprise 50% of the index’s market value. By comparison, looking back annually to 1980, on average the 51 largest companies in the S&P 500 have been needed to reach, in aggregate, 50% of the index’s total market value. As illustrated in the following chart, the stock that accounts for the 50% market cap percentile (at present the #53 stock in the index) currently has a 0.42% weighting in the S&P 500. This is roughly on par with the long-term average. Clearly, this is a very different market than that seen during the late-1990s bubble, in which market valuation extremes were more concentrated in tech stocks. In 1999, it took only the 33 largest stocks in the S&P 500 to reach 50% market cap, with the #33 company having a 0.72% weighting in the index.

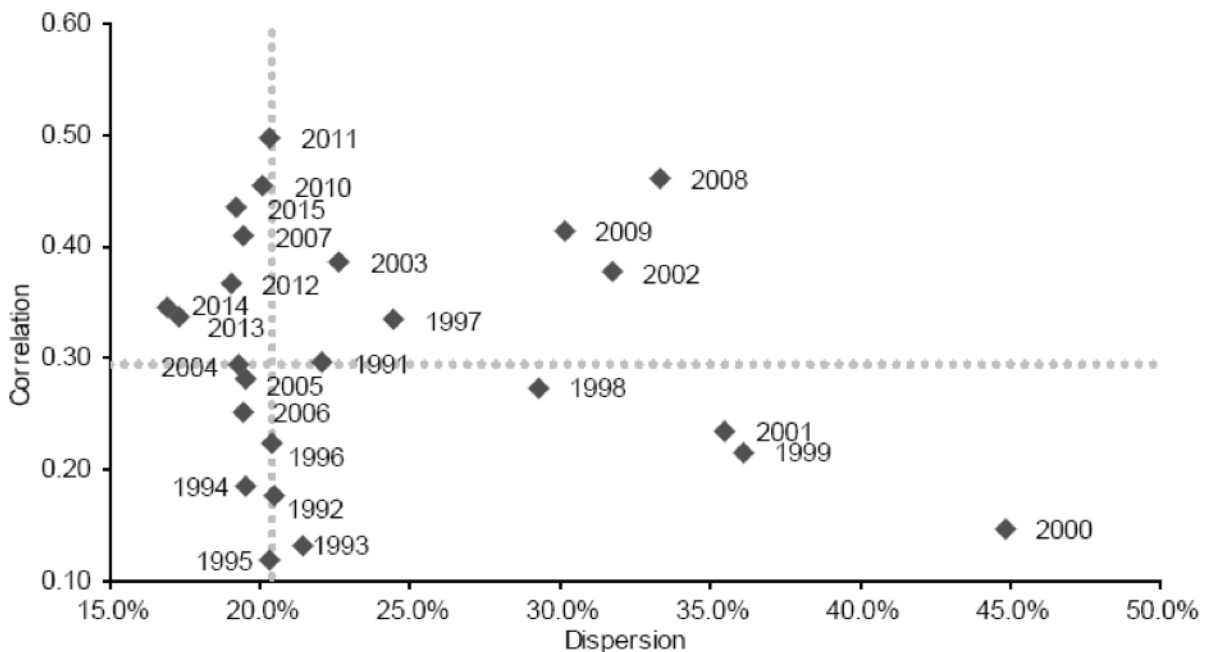
Weighting of Median Stock in S&P 500, 1980-2016



Source: S&P Dow Jones Indices

In recent years, stocks in the S&P 500 have also demonstrated somewhat above-average correlation (stocks moving in the same direction over short periods of time) and much lower dispersion (magnitude of returns across the component stocks, such as measured by the standard deviation of returns) than prior bubbles or subsequent market downturns. As illustrated in the following chart, in contrast to recent years, the S&P 500 exhibited extremely elevated dispersion and below-average correlation between 1998 and 2001 as the tech bubble formed. But S&P 500 sector and stock-level correlations have collapsed since the November 2016 election, which has caused a rapid reassessment in the outlook for a variety of factors such as interest rates, tax rates, foreign exchange rates, and regulations (e.g., health care). This implies that a more attractive market for stock picking has emerged.

S&P 500 Dispersion and Correlation, 1990-2016

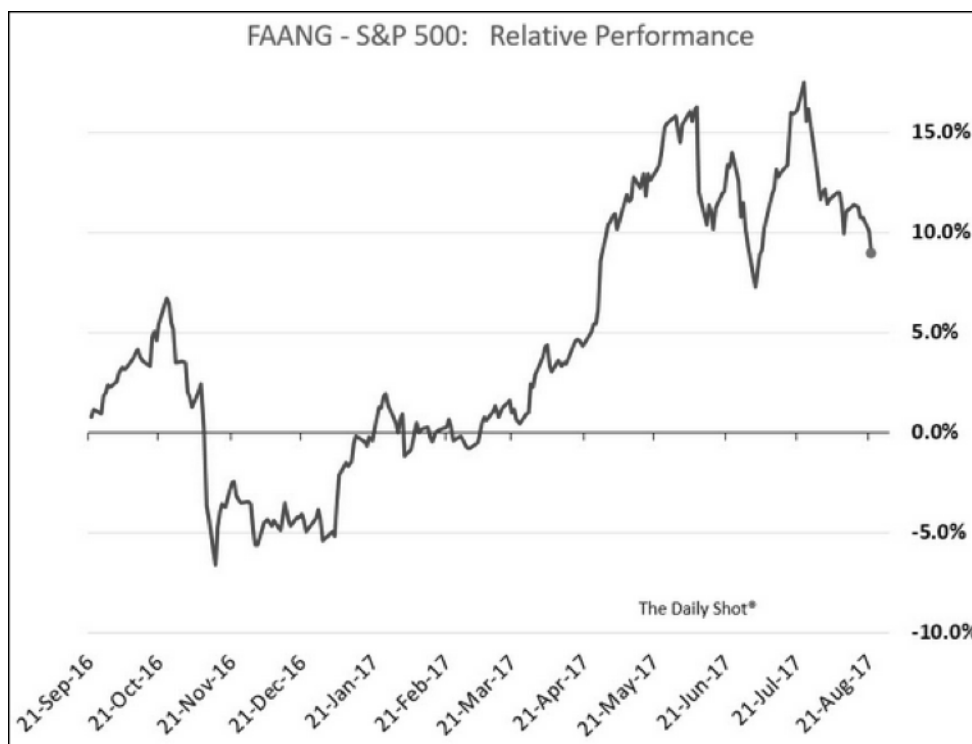


Source: S&P Dow Jones Indices

Introduction

To what extent are ETFs behind recent market patterns? ETFs are almost certainly creating distortions. ETFs may be partially responsible for the decline in dispersion and increase in correlation (until recently) among S&P 500 stocks in recent years, as well as for the concurrent expansion in market-level valuations. But as mentioned earlier, it is important to understand that not all ETFs are created equal and that the recent collapse in stock correlations suggests that the sway of passive, broad market-indexed ETFs over market performance is limited. Putting aside technical issues,³ truly passive ETFs indexed to broad markets should not be directly driving major valuation distortions between stocks within the major index such as the S&P 500. (Nor are they correcting for valuation distortions.) For example, by definition \$100 billion (or a sufficiently large value) in fund flows from the universe of managers who are benchmarked to the S&P 500 fund managers and into S&P 500 ETFs like SPY will generate roughly the same number of Apple shares sold by funds as purchased by the ETF. To the extent that funds flow from underperforming, alpha donating fund managers/brokers and self-directed retail brokerage trading into passive, broad index ETFs, this should—perhaps counterintuitively—increase long-term market efficiency by concentrating market-moving portfolio decisions in the hands of wiser investors.

Whether hedge funds are distorting valuations in the current market is a different question—probably with a different answer. For example, the Goldman Sachs Hedge Fund VIP Index (which tracks the stocks most frequently appearing among fundamentally driven hedge fund managers' top 10 positions) has shifted to an extreme overweight position in technology stocks (38% weighting on September 29) as these stocks have massively outperformed in 2017. The burgeoning quantitative hedge fund category could be driving even greater divergence in performance between stock categories. This category of funds may pose a very large if unquantifiable market risk if and when historical correlation patterns break down.



Source: WSJ

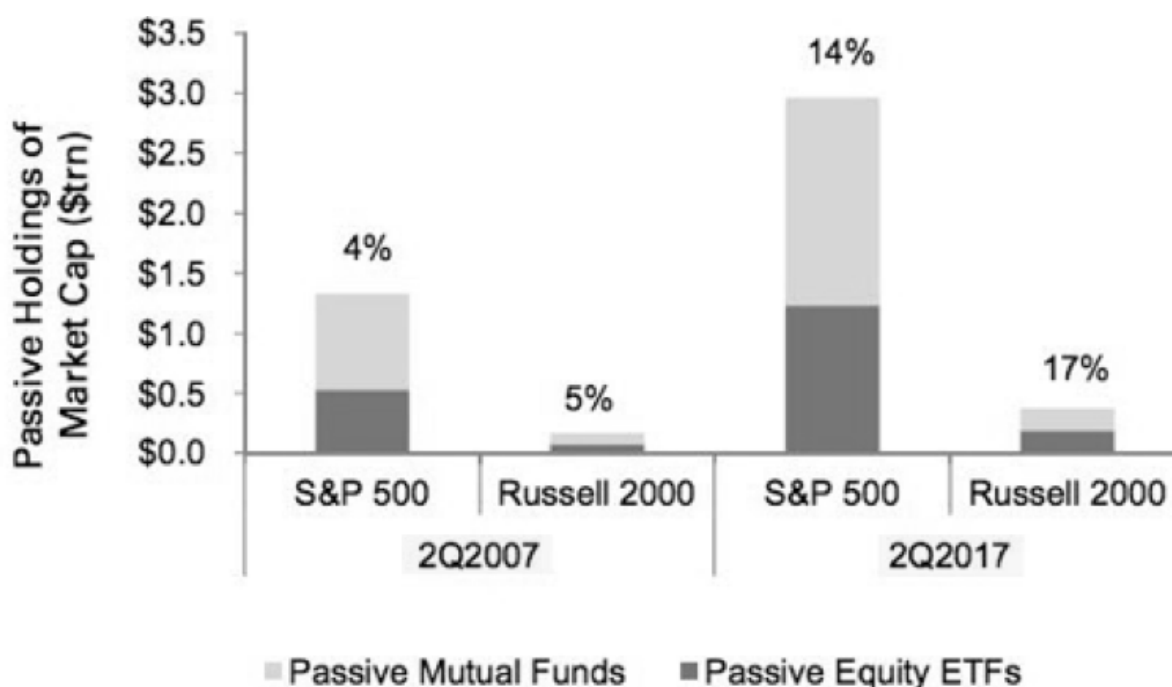
This is not to say that passive ETFs do not have any market impact. According to Bank of America research, individual securities with larger passive ETF ownership tend to exhibit more elevated volatility, and small-cap index-tracking ETFs tend to have an outsized impact on the performance of the least liquid, smallest

³ These include float adjustments, relative stock weight, and cash positions among funds suffering net withdrawals, which are nontrivial but relatively minor when viewed on a market-level scale. External fund flows can also create market-level valuation changes.

Introduction

companies in the index.⁴ At the most extreme levels of market share, passive ETFs would cause increased market correlation and a breakdown in price discovery. However, we are still very far from that point. Passive ETFs and passive mutual funds (which are actually a larger category) now hold 14% of S&P 500 company shares and 17% of Russell 2000 company shares. This is up by >300% over the past 10 years. Robo advisors and the implementation of fiduciary rules continue to drive advisor-managed funds into ETFs. Meanwhile, institutional investors such as pensions and endowments are also jumping on the ETF wave. For example, John Skjervem, the chief investment officer of the \$90 billion Oregon State Treasury, recently commented on his decision to move 15% of the pension's equity portfolio into passive funds as well as on his long-term view that up to 80% of the pension's public stock and bond portfolio could end up in passive vehicles: "What's going on is a generational shift. Guys like me are moving in, and we had education that was empirically more rigorous than the prior generation's."⁵

Estimated Holdings of Passive Funds in S&P 500 and Russell 2000



Sources: WSJ via FactSet, Bloomberg, Goldman Sachs

Active ETFs Proliferating—Risks Abound

As noted previously, ~40% of U.S. equity assets under management (AUM) are passively invested if we include rules-based factor investing—which is really active investing without a human interface. The case for truly passive ETFs is strong for unsophisticated long-term investors, but in the real world, ETF investing patterns are not so rational. A growing portion of ETFs are not constructed to be passive market indexers but rather are essentially active investors. If passive indexes improve efficiency by reducing fees and withdrawing money from underperforming investors, active ETFs are likely to have the opposite effect. These fund flows tend to exhibit performance-chasing patterns driven by backward-looking retail investors (and some advisors) rushing into the latest "hot" ETFs. Chief among these are factor-based or "smart beta" ETFs.

⁴ Chris Dieterich and Corrie Driebusch, "Wall Street's newest puzzle: What passive buying and selling means for individual stocks," *The Wall Street Journal*, September 21, 2017, https://www.wsj.com/article_email/wall-streets-newest-puzzle-what-passive-buying-and-selling-means-for-individual-stocks-1505986202-1MyQjAxMTE3NjI1MjAyNDI1Wj/.

⁵ Anne Tergesen and Jason Zweig, "The dying business of picking stocks," *The Wall Street Journal*, October 17, 2017, https://www.wsj.com/articles/the-dying-business-of-picking-stocks-1476714749?mod=djmc_pkt_email_092617

Introduction

Popular investing factors that are isolated or combined into ETFs include momentum, minimum volatility, value/growth, quality, dividend, and size (typically small-cap-biased). Many of these factors are marketed based on academic research that document long-term excess returns or diversification as well as risk reduction benefits. For example, low-volatility and dividend stocks materially outperformed during each of the past two bear markets. However, these historical relationships are founded on varying degrees of strength and fundamental soundness. There is a long-raging debate in both academia and the investment community over whether the outperformance of factors such as value and small capitalization reflect appropriate compensation for higher risk or anomalies of an inefficient market. Likewise, it remains uncertain whether these factors will continue to outperform in the future (and their outperformance has diminished in recent decades). In fact, fund flows into factor ETFs could be the mechanism for eliminating these historical anomalies.

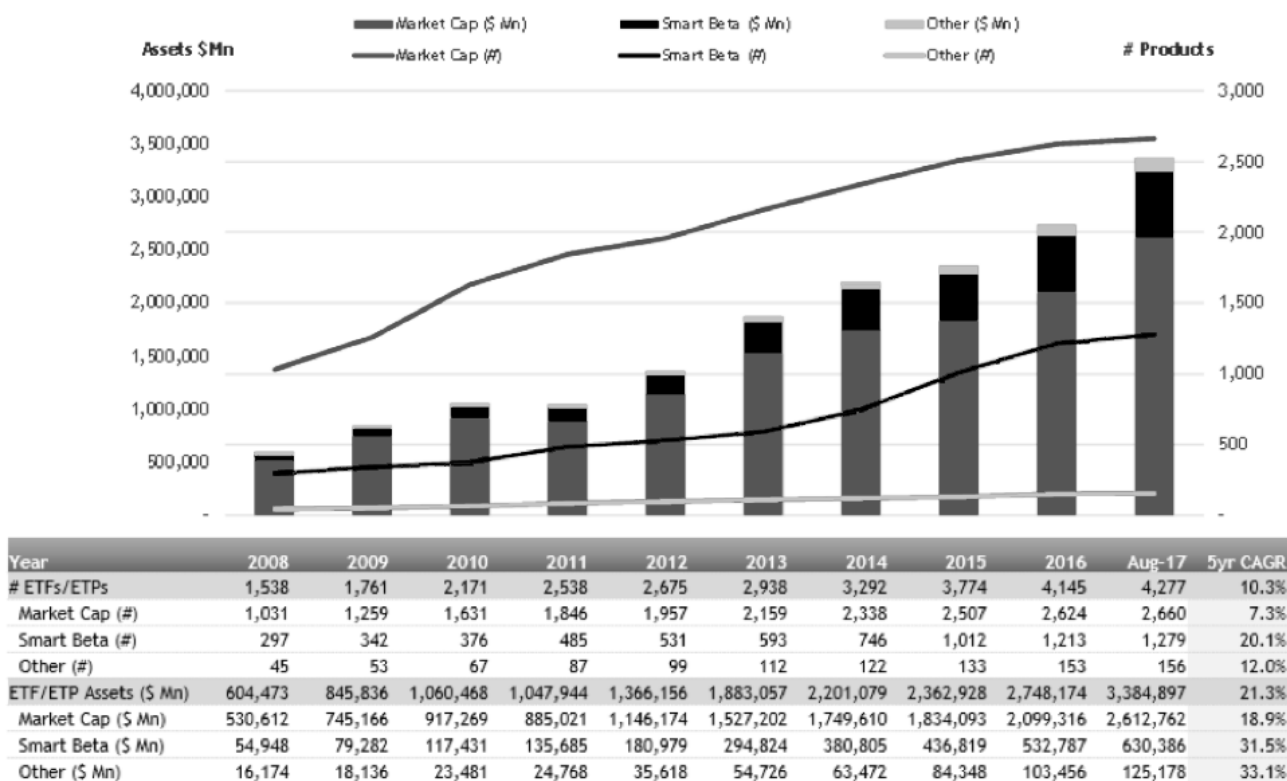
Other ETFs that should be considered forms of active investing include sector ETFs and equal-weight (EW) ETFs. The ease of investing in sector ETFs may be behind recent patterns of divergent performance across sectors and could create sector bubbles. EW ETFs are actually thinly veiled active investment strategies that style tilt to smaller companies. In fact, one of the largest EW ETFs, the Guggenheim S&P 500 Equal Weight ETF (RSP), markets itself as “the first smart beta ETF.” By definition, the smaller the company, the more the EW ETF is overweight (as a percentage of the company’s market cap or float). To a lesser extent, EW ETFs style tilt toward anti-momentum and traditionally defined value stocks, as smaller and lower multiple companies are more likely to be recent underperformers. Unlike market-weighted ETFs, equal-weighted funds also involve active rebalancing, with potentially high portfolio turnover unless limited by rebalancing rules.

To help crystallize the distortive impact of fund flows into active ETF strategies with a theoretical scenario for illustrative purposes: If \$100 billion in S&P 500-tracking ETFs flowed into ETFs tracking the S&P Equal Weight Index (or vice versa), Apple (the highest-weighted stock in the SPY, at 3.8%) would see selling (or buying) pressure equivalent to just 0.5% of its float, or less than a day’s average trading volume. By contrast, Patterson Companies (the smallest company in the S&P 500) would see inflows totaling 6.2% of its float if the funds flowed into EW ETFs. Another ETF that exemplifies the risk posed by fund flows into both sector/industry ETFs and equal-weight ETFs is the SPDR S&P Biotech ETF (XBI). This \$4.4 billion ETF invests across 100 biotech companies using a modified equal-weighted index. As a result, this relatively modestly sized ETF alone holds >3% weightings in some of the smaller stocks in the index. Speculative and momentum-driven investment flows into or out of this ETF could cause valuation distortions and huge volatility in the share price of these smaller companies.

Recent data suggest that active ETFs may have reached large enough scale that their market impact is no longer theoretical. Last year, BlackRock projected that equity smart beta ETF assets would grow from ~\$300 billion in 2015 to \$1 trillion by 2020 and \$2.4 trillion by 2025.⁶ ETF data from independent research firm ETFGI suggests that smart beta asset growth has been even more rapid. As illustrated in the following chart, ETFGI estimates that equity smart beta ETF/ETP assets reached \$630 billion globally at the end of August 2017, with 76% of assets linked to U.S. markets. This represents 18% growth YTD from \$533 billion at the close of 2016 and an astounding 5-year CAGR of 31.5%. This compares to a 21.3% 5-year CAGR for all ETF/ETP assets and translates to a smart beta share of 18.6% of all ETF/ETP assets. ETFGI estimates that another \$61 billion in assets are in other actively managed ETF/ETPs that do not track any specific index.

⁶ BlackRock, “BlackRock projects smart beta ETF assets will reach \$1 trillion globally by 2020, and \$2.4 trillion by 2025,” May 12, 2016, https://www.blackrock.com/corporate/en-us/newsroom/press-releases/article/corporate-one/press-releases/blackrock-smartbeta-research_US

Market-Cap-Weighted and Smart Beta ETF Assets (\$MM)



Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources and data generated in-house.
 Note: active equity ETFs/ETPs are excluded as they do not track a specific index.

Source: ETFGI

The rapid inflow of assets into active/factor ETFs is likely to eliminate—and perhaps even reverse—historical performance relationships supporting factor ETFs. Institutional investors are also using ETFs to quickly express market opinions on a large scale without the time and liquidity constraints of selling and buying individual securities. Rapid shifts in ETF fund flows between sectors and industries and various markets can increase within-sector volatility and create wider dispersion of returns across sectors. This should create more opportunities for active stock pickers.

Passive ETFs Risks Remain

The risks posed by factor ETFs are quite evident. But even the theoretical argument for passive ETFs, to which we have given much more credence, fully holds only under a committed buy-and-hold philosophy across complete market cycles. From a market timing perspective, the current U.S. stock market environment appears particularly unsuitable for a passive investment philosophy. Market-level valuations are at the highest levels since the dot-com bubble, whereas corporate profit margins are simultaneously at record highs. Value stocks have also largely underperformed growth stocks for years, including ~1,100 bps underperformance by S&P 500 value stocks versus S&P 500 growth stocks YTD (through 9/30/2017). Correlation between stocks in the S&P 500 has plummeted since the November 2016 election, reaching lows not seen since 2001 and creating—at least temporarily—a true “stock picker’s market.” These conditions tend to develop as bull markets reach their limits (2000, 2007). As should be no surprise to market historians, investors are rushing into ETFs just as the market appears to be diverging and a majority of active fund managers are outperforming (54% in 1H17).

ETFs’ liquidity advantage also introduces its own risks. It is difficult to quantify the impact, but ETFs appear to exhibit outsized volatility in market corrections as their ease of trading makes them a prime source of liquidity. Advisors have historically tended to act as an additional buffer limiting individual investors’ instincts to

Introduction

withdraw funds during market downturns, but the shift to roboadvisors and ETFs is likely to lead to faster withdrawals during the next major downturn. According to *Business Insider*, roboadvisors are defined as “automated investment platforms that use algorithms to manage and allocate investor’s funds, analyzing each customer’s current financial status, risk aversion, and goals.” This relatively new phenomenon has quickly achieved massive scale, fueled by both technological innovation and an increased appetite for passive investing products. According to an analysis by Aite Group, the currently more than 2,000 roboadvisors have more than \$140 billion in AUM, up from just \$3 billion in 2013. AUM growth for this category is expected to remain robust for the foreseeable future. However, the newness of the automated roboadvisor approach also means that its performance and capabilities have yet to be tested by a significant market correction. Like most passive products, roboadvisors typically offer fees that are materially below those of more traditional actively managed alternatives. Yet there is a trade-off for these lower fees, as considerations such as investor education and general guidance for decision making may receive less attention than accounts managed by more conventional financial advisors. Consequently, this newly created market segment may have produced an entire class of consumers who are less financially sophisticated and who are dependent on a strategy that is yet untested by a major market correction. In our view, this creates a recipe for poor investor decisions and wealth destruction during the next period of extended market weakness.

ETF liquidity could create a sudden spike in volatility in a market panic, as seen in the August 2015 “flash crash.” While the 2015 flash crash was triggered by S&P futures trading, it led to widespread dislocation between ETF prices and NAV. According to the SEC’s report on the flash crash, volatility was markedly higher in ETFs/ETPs than the broader market, with 19% of ETPs declining 20% or more during the day versus 5% of corporate securities.⁷

The Death of Active Investing Is Greatly Exaggerated

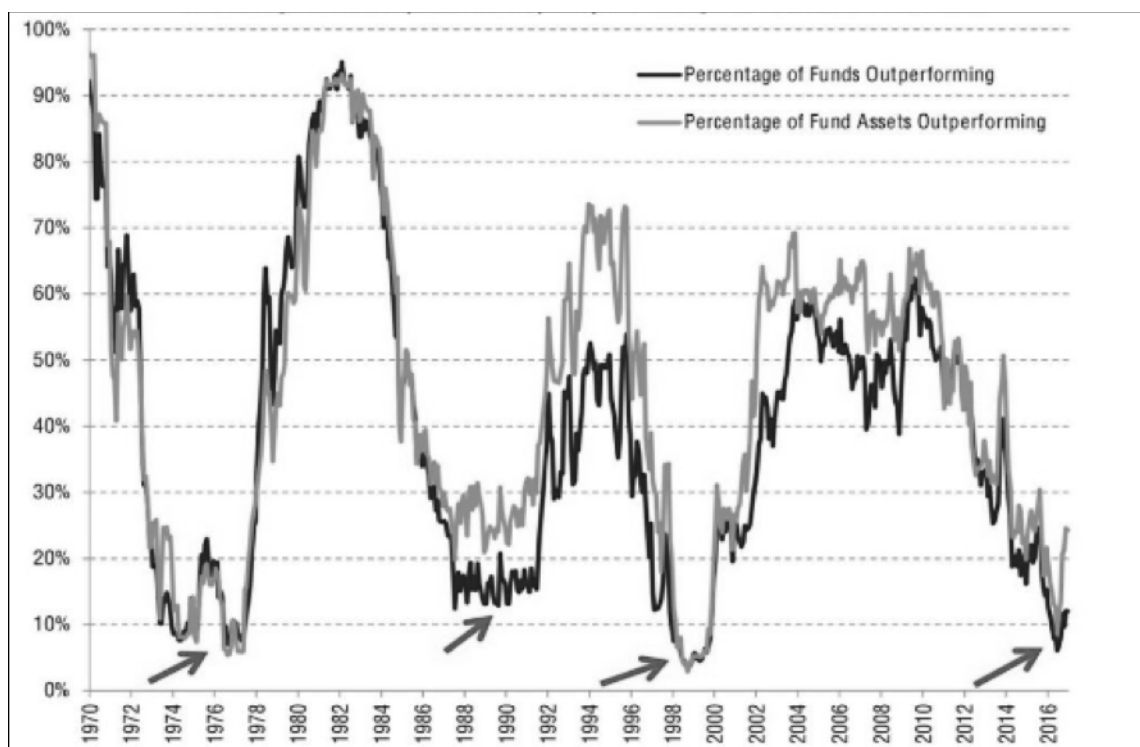
“It was like shooting fish in a barrel.” That’s how Warren Buffett and Charlie Munger described value investing when they first started out in the business. Someone making that claim today, however, would likely be viewed as either a genius or delusional. With active managers losing assets to indexing and suffering from fee compression (the average expense ratio of U.S. equity funds fell to 63 bps in 2016, down from 99 bps in 2000 according to the Investment Company Institute), today the investment management industry is the polar opposite of shooting fish in a barrel, as the business has become far more institutionalized. Back when Buffett was flipping through the *Moody’s Manual* and finding well-capitalized insurers trading at 2x earnings, less than 10% of U.S. trading volume was institutional. In short, prices were largely being set by retail investors decades before the Internet was even conceived. Over the past 50 years, institutional trading has steadily gained share; today it accounts for more than 95% of U.S. trading volume. Moreover, the quantity and quality of institutional investors has increased markedly. During the past 5 decades, the number of investment management professionals rose from 5,000 to over 1 million. Moreover, the number of CFAs went from zero to 135,000, the number of Bloomberg terminals jumped from zero to 320,000, investment research exploded, and the Internet and Regulation FD (fair disclosure) leveled the playing field.⁸ Should it come as any surprise that active managers are underperforming given that Mr. Market is much smarter today?

While the heightened level of competition seems to spell the death of active management (as the investment management business is unlikely to become less competitive in the future), there is substantial hope when one examines an equally important metric. Within a steady trend of rising competitiveness in the business, there has been an equally consistent cyclical trend: the underperformance/outperformance of active management.

⁷ Securities and Exchange Commission, Office of Analytics and Research, Division of Trading and Markets, “Research note: Equity market volatility on August 24, 2015,” https://www.sec.gov/marketstructure/research/equity_market_volatility.pdf.

⁸ Charles D. Ellis, “The end of active investing?,” *Financial Times*, January 20, 2017, <https://www.ft.com/content/6b2d5490-d9bb-11e6-944b-e7eb37a6aa8e>.

Percentage of Funds/Fund Assets Outperforming the S&P 500, 5-Year Basis



Source: MarketWatch

“We have been here before”: this is the obvious message of the preceding chart. Substantial underperformance by active management has typically occurred near market tops, which are often characterized by a narrowing of market breadth in which a select number of stocks drive a disproportionate amount of the market’s performance. Today’s “must-own” FAANG stocks are eerily reminiscent of the Nifty Fifty of the bull market that ended in the early 1970s. In most of the prior cases, the stocks that led the market on the way up (which were typically expensive and under-owned by active managers) significantly underperformed the market on the way down, contributing to the outperformance of active management.

The preceding chart also suggests that now is a good time to bet on active management, as whenever active management has underperformed to such an extent (at the recent low, less than 10% of active funds/assets outperformed the market over the prior 5 years), it has historically been followed by a pendulum swing to another extreme where the majority of active funds/assets outperformed. In fact, we may have already seen the turn; in the year ending June 2017; over half of all U.S. equity mutual funds outperformed their benchmark.⁹

Passive Investing Impacting Institutional Asset Management Business

The trend toward passive investing has materially impacted the world of institutional investing as well. This well-documented migration of assets has impacted a wide range of actively managed mutual funds and hedge funds. The mixed performance records of actively managed funds, combined with a relatively higher fee structure, has shifted fund flows from actively managed products to passively managed products for several consecutive years. This trend becomes quite evident when one examines the recent actions of several state pension systems. We were particularly struck by an article from the October 19, 2016, edition of the *Wall Street Journal* titled “What Does Nevada’s \$35 Billion Fund Manager Do All Day? Nothing.” The article describes the investment approach of the Nevada Public Employees’ Retirement System, which has now shifted all of its

⁹ Robin Wigglesworth, “The return of the stock picker,” *Financial Times*, September 24, 2017, <https://www.ft.com/content/294de4ec-9eb2-11e7-8cd4-932067fbf946>.

Introduction

assets into low cost index funds—a focus that appears to place greater emphasis on management fees than on performance. The article further indicates that this situation is far from isolated in the pension industry and that U.S. public pensions now have about half of all equity allocations placed in index funds (more than double the level from a decade ago). In our view, the Nevada pension system story and similar stories across the country—such as the Oregon Treasury CIO’s commentary referenced earlier—suggest that a passive investing bubble may be taking shape among institutional investors. During a multi-year period of strong equity market appreciation, most investment products will post positive results, and it becomes increasingly challenging for active managers to outperform benchmarks in such an environment. However, this shift to indexing could have severe ramifications during a market correction, as passive products are unable to deviate from benchmarks. Although institutional investors are generally better informed than their retail peers, we believe that both groups will be at risk for significant losses during the next market correction as passive products continue to blindly purchase the broader market indices.

“Closet Indexing” and the Pressure to Perform

The underperformance of actively managed funds relative to benchmarks can be problematic on multiple levels. In addition to failing to achieve a superior return for investors, this performance shortfall creates headwinds for actively managed funds in the form of outflows and reduced management fees. These considerations can cause some fund managers to alter their investment approaches in order to close the performance gap, resulting in actively managed funds with holdings and position sizes that closely resemble their benchmark. “Closet indexing” is far from a new development, but the market dynamics of recent years (where most active managers have failed to beat their index) may cause underperforming managers to feel increased pressure to engage in this practice. During 2016, for example, nearly two-thirds of actively managed large-cap funds trailed the S&P 500. Closet indexing can be destructive on multiple levels, in our view, both for clients and for active managers. However, we would expect this reality to continue unless index-based returns enter a period of extended performance weakness. Unfortunately, it may require a significant market correction for the pitfalls of this strategy to be fully exposed.

In our view, closet indexing represents a scenario in which the interests of the fund manager and the investors are not fully aligned. A closet index fund continues to charge clients the higher fees associated with an actively managed strategy, while ultimately delivering returns that are unlikely to materially deviate from the returns offered by lower-cost passive products. According to Morningstar, the average expense ratio for passive funds is 0.17%, compared to 0.75% for active funds. Consequently, it could be argued that an active manager with a closet index strategy is collecting over 50 basis points in additional fees for creating little or no incremental value for shareholders. This practice may be particularly appealing to active fund managers who already possess significant economic scale (firms with high levels of AUM and fees), who seek to minimize the potential economic risks to the firm and its employees that can result from benchmark deviations. Fund performance characteristics such as a high R-squared and a low tracking error relative to a benchmark can often be indicative of a closet indexing approach. We would argue that the practice of closet indexing fails to satisfy the fiduciary duty that all investment managers should be adhering to.

“That dynamic creates a powerful incentive for managers to mimic the market. If they don’t take extra risks, their funds won’t fall much more than the market during a downturn and will go up nearly as much during any rise. So long as the market goes up more over time than the amount of money that disgruntled investors pull out, the fund managers won’t jeopardize their own paychecks.”

– Jason Zweig, Wall Street Journal, October 28, 2016

The building pressure to mimic indices has significant ramifications for individual stocks as well. Stocks that are prominently represented in well-recognized indices are likely to have higher degrees of institutional ownership as a result of this trend. Consequently, purchase of such securities will tend to reflect index-oriented considerations (e.g. a fund manager choosing to buy a security mainly because it is part of his/her benchmark), while the underlying fundamentals of the underlying companies have a diminished relevance for the institutional buyer. Until this trend abates, a concentrated group of large-cap companies will continue to serve an ever-growing role within the indices and will receive further support from institutional investors regardless of valuation or any other fundamental issues. The often discussed FAANG stocks now represent about 7% of the S&P 500, while the 50 smallest companies in the S&P 500 now account for less than 1.5% of the overall index. Clearly,

Introduction

companies with little or no representation within market indices have become increasingly neglected in the current market environment. For investors seeking stocks with an attractive long-term risk/reward, this overlooked segment of the market could offer a promising universe of potential opportunities.

Thinking Outside of the Index

Securities must meet specific criteria to garner inclusion in the key S&P 500 indices, such as being a U.S.-domiciled company, offering adequate liquidity, and maintaining a primary listing on a U.S. exchange. Furthermore, a number of share structures make a company ineligible for inclusion, including business development companies and limited partnerships. In addition, companies with a tracking stock structure are ineligible for inclusion in the main S&P indices. In July 2017, S&P Dow Jones indices announced that the S&P Composite 1500 and its component indices (S&P 500, S&P Mid Cap 400 and S&P 600) would no longer add companies with multiple share class structures (although existing index constituents were grandfathered in). The S&P indices are maintained by a committee of 10 members (9 of whom are anonymous), drawn from among S&P Dow Jones Indices employees, who attempt to include stocks that collectively represent the U.S. economy. The committee also has the discretion to override its inclusion criteria for companies that no longer meet its standards. For example, in 2012 the S&P decided to consider to include Aon in the S&P 500 despite its decision to incorporate outside the U.S. Elaborating, David Blitzer, who chairs the S&P Dow Jones Indices committee, stated that, “we will list a company that we believe, and everyone else in the investment community believes, is a U.S. company, even though it’s incorporated outside the U.S.”

We believe that the trend of fund flows to passively managed investment vehicles has created opportunities for active managers. With assets flowing into index funds, shares of securities are being purchased regardless of their valuation. Meanwhile, the combination whereby asset outflows from securities is coupled with indiscriminate investor buying has increased the valuation discrepancy between shares included in an index and those that are not included in the index. Epoch Investment Partners recently examined the impact of passive investing on market efficiency, citing a 2012 study by Eric Belasco, Michael Finkie and David Nanigian entitled “The Impact of Passive Investing on Corporate Valuations,” which looked at the valuations of stocks inside an index relative to valuations of stocks not included in the index during the period from 1993 to 2007. The study concluded that flows of funds into the S&P 500 index created a valuation discrepancy between index and nonindex stocks on the magnitude of 1.8% on a P/E basis and 1.5% on a price/book value basis. Accordingly, we believe that investors could benefit from looking at securities that are outside of an index as a way to capitalize on the valuation discrepancies between a constituent and non-constituent, which has likely increased subsequent to 2007 as a result of fund flow trends that have seen a significant amount of assets move into passive strategies and out of active strategies.

How Do Index Orphans Become Discovered?

Supermodels are frequently asked, “How did you get discovered?” The answer seems to be that there is no single answer; every story is different. Not to suggest that we’ve done an exhaustive study, but in posing the question to one woman (a mere model; no “super” status involved), we were surprised to learn that “at my uncle’s funeral” is also how it can happen.

In the same way that a person with model-caliber looks need not be concerned with getting discovered, we believe that worrying about how index orphans will get discovered is futile. Intrinsic value has historically acted as a magnet, drawing stock prices toward it over the long run. The conventional ways in which index orphans have become discovered include index inclusion, new or increased sell-side coverage, and M&A. But stock prices can also reach intrinsic value in unpredictable ways—a bucket we will refer to as “the uncle’s funeral.”

Near the top of the list in our eclectic bucket is MoneyGram International Inc. (MGI), the #2 competitor to Western Union (WU) in international money transfer. To call MGI a mere index orphan would be a compliment: Before the financial crisis, its fixed income department, tasked with investing the float of its money order business (a far smaller business within the company than money transfer), took overweight positions in subprime mortgages and CDOs. MGI’s losses ultimately exceeded \$1.5 billion, more than half of the company’s peak market cap set in 2006. MGI required a bailout by Thomas H. Lee and Goldman Sachs, which substantially diluted common shareholders. By late 2011, the company’s low-single-digit stock price led the board to implement an 8:1 reverse stock split in hopes of regaining some respectability in the stock market. In

Introduction

2014, just as MGI was getting its bearings, its largest customer, Wal-Mart, announced that it would offer a competing domestic money transfer product (from one Wal-Mart store to another) at a large discount to MGI's pricing, putting substantial pressure on MGI's revenues over the next two years. But 2017 was the year of the uncle's funeral, as a bidding war broke out for what had been a nearly left-for-dead stock. Ant Financial offered to buy MGI for \$13.25 per share in January (MGI shares traded at ~\$6.50 in October 2016 before deal speculation drove the stock higher), then Euronet bid \$15.20 in March, and finally Ant Financial raised its bid to \$18.00 in April. Orphaned from all indices, MGI substantially outperformed all of the FAANG stocks in the past year.

In our view, active managers will once again outperform the indices in the same way that they always have: by owning stocks trading at large discounts to intrinsic value and being patient. Given the unprecedented inflows into index funds, we believe that one of the best hunting grounds for such large discounts to intrinsic value is likely to be in index orphans.

Updates on Index Orphans in the Existing AAF Universe

In this section, we provide updates on a few securities that have been previously profiled in *AAF* and that are not in one of the major S&P indices:

Conduent Incorporated (ticker: CNDT, \$16.30)

The newly independent Conduent was spun off from Xerox in January. Conduent is in the business process outsourcing (BPO) industry. CNDT's services and capabilities include customer care, human resources, payments, transaction processing, and transportation services. We believe CNDT has multiple catalysts for value creation during the coming years, and its exclusion from market indices has caused this opportunity to be underappreciated by investors. Moreover, CNDT possesses many of the traits that have allowed spin-offs to outperform historically. In addition to significant cost reduction potential (\$700 million), there should be meaningful potential to enhance margins by addressing underperforming businesses and boosting investment in higher-return areas. In addition, CNDT has meaningful growth opportunities. Its ~\$6 billion in annual revenue is modest relative to its addressable market, which is roughly \$260 billion, and its addressable market has been growing at approximately 6% per year. Our estimate of intrinsic value for CNDT is approximately \$23 per share. This estimate assumes an EV/EBITDA multiple of 8.0x and a P/E ratio of 14.0x applied to our 2019 financial projections. In our view, this estimate of intrinsic value could prove to be conservative from a long-term perspective, and it is conceivable that CNDT could become an acquisition candidate at some point.

Liberty Global plc (ticker: LBTYA/LBTYB/LBTYK, \$30.82)

Liberty Global (LGI), chaired by cable tycoon John Malone (3% economic, 25% voting stake), is the leading cable systems operator in Europe, with 26 million customers. LGI is a prototypical index orphan. LGI is co-domiciled in the US and the UK, generates substantially all of its revenue in the UK and EU, but is listed on the NASDAQ. LGI has three share classes and is also a tracking stock, with a separate currency tracking the value of its Latin American and Caribbean assets (LiLAC Group, ticker LILA/LILAB/LILAK). Unsurprisingly then, LGI is not included in the major indexes in the US or Europe, and its passive ownership stands at just ~7%. LGI shares have declined 53% from their mid-2015 highs, reflecting deflated expectations of a buyout (Vodafone remains a potential long-term acquirer), currency headwinds, and execution stumbles at Virgin UK's Project Lightning expansion operation. Yet the company remains uniquely well positioned to capitalize on secular growth in broadband consumption and quadruple-play integration in the coming years. At 9.5x EBITDA, we estimate LGI's intrinsic value could reach \$48/share in 2 years.

QVC Group (ticker: QVCA, \$22.24)

We have long believed that QVC Group's status as a tracking stock has prevented it from attaining a multiple reflective of its strong underlying fundamentals including outsized profitability (+20% EBITDA margins) and robust free cash flow generation. As we noted earlier in our introduction, tracking stocks are precluded from indices maintained by Standard & Poor's. However, QVC Group is scheduled to become its own asset-backed company following the separation of its sister tracker Liberty Ventures during the first quarter of 2018. In our view, the pending separation could pave the way for meaningful multiple expansion at this premier online retailer that currently trades at an attractive valuation and offers multiple avenues for future growth. Our estimate of the Company's intrinsic value is \$32 a share (pre HSN combination), representing ~44% upside from current levels. There are a number of factors that could drive meaningful upside to this projection including the realization of

Introduction

synergies associated with the pending HSN transaction, improved free cash flow generation associated with the pending exchangeable debentures reattribution, outsized share buybacks, further traction with zulily, or improvement in the Company's new markets including France and China.

This Year's Class of Index Orphans

Autoliv, Inc. (ticker: ALV, \$126.28)

Autoliv, Inc. is the world's largest automotive safety supplier and generated \$10.1 billion in total net sales during 2016. The passive safety (78% of sales) business has a 39% global market share across its key categories (seatbelts, airbags, etc.) while the electronics business (22%) has strong positions in its respective businesses. Despite Autoliv's U.S. incorporation and U.S. listing, we believe that the Company is an underappreciated business (it is excluded from key S&P indices because of its foreign domicile) and that the recently announced decision to separate the Company could help to highlight its value. A number of factors should enable Autoliv's passive safety segment to generate strong future growth including emerging market vehicle growth, the prospect for increased safety content per vehicle, and strong new order growth with ALV commanding over 50% of the share of new orders over the past 2-3 years. The Company's electronics segment has disappointed investors in terms of both revenue and profitability, but its prospects are looking up and the business stands to be a significant beneficiary as the movement toward autonomous driving gains traction. At current levels, we believe that investors are effectively purchasing ALV's passive safety business at a nearly 10% discount to private market value and are receiving the Company's high-growth electronics business for free. Our conservative intrinsic value estimate for the electronics business in the near term is roughly \$23 a share, but could be worth upward of \$100 per current Autoliv share longer term.

Axalta Coating Systems Ltd. (ticker: AXTA, \$28.29)

Shares of index orphan AXTA recently sold off after reporting disappointing results. With the stock trading at a compelling valuation, we view AXTA as slightly more attractive today than at the time of our initial profile (June 2016 at \$25.38). AXTA's private equity overhang has been lifted, and the coatings industry appears ripe for further consolidation. AXTA is the world's fifth-largest supplier of industrial coatings. AXTA's largest business, refinish coatings (50% of EBITDA), is one of the best and highest margin businesses within coatings. Overall end market growth in coatings has slowed in recent months, but M&A activity has picked up. Deal multiples for large companies (like AXTA) have significantly expanded to mid-teens on EBITDA, due to scarcity value and competition from private equity, while those for smaller companies remain around 10x. Trading at 11.5x depressed 2017 EBITDA, AXTA stands at the sweet spot of M&A. If the Company were to be acquired, AXTA could command 13.5x-15x. As a buyer, though, AXTA can continue making bolt-on acquisitions at attractive multiples. We believe AXTA should be able to sustain mid-single-digit EBITDA growth over the long term. On our 2020 EBITDA estimate, AXTA trades at an attractive 8.7x. We estimate AXTA's intrinsic value to be \$41 per share (11.5x) at the end of 2020, for 46% upside. Moreover, AXTA shares come with an embedded call option on a takeover. We project AXTA's private market value to be \$50-\$57 per share at the end of 2020, offering 79%-104% upside. Index inclusion is an additional catalyst.

Hostess Brands, Inc. (ticker: TWNK, \$13.43)

TWNK's predecessor parent companies made 2 bankruptcy filings in less than 10 years due to operations plagued by high costs, unmanageable liabilities, and an inefficient business model. However, the Company was purchased by private equity investors out of Chapter 7 in 2013, and significant restructuring and investments have been completed that position the firm for sustainable long-term growth. The new Hostess generates over \$700 million in annual revenue and has an EBITDA margin of approximately 30%. The firm's more efficient operations are supported by a revamped manufacturing approach, a new distribution system, and an overhauled product line. Since its first full year of operation after emerging from Chapter 7 in 2014, TWNK has increased its revenue by over 35%. However, TWNK remains omitted from stock market indices, and eventual inclusion in one or more indices could be a potential catalyst. Despite having margins and organic growth that exceed its competitors, TWNK trades at over a 25% discount compared to peers. In our view, there is no fundamental justification for such a valuation disparity. Our \$20 estimate of intrinsic value assumes multiples that are consistent with the historical trading range of industry peers (13.0x EV/EBITDA, 25.0x P/E, applied to 2020 projections) but that are a meaningful discount to current valuations for TWNK's competitors. It is also worth noting that TWNK could eventually be an acquisition candidate, and recent transactions within the industry have been priced at an average multiple of approximately 15.0x EV/LTM EBITDA.

Introduction

Sinclair Broadcast Group, Inc. (ticker: SBGI, \$29.65)

Sinclair is the largest local TV broadcaster in the US with 173 stations in 81 markets and \$2.7 billion in annual revenue. Sinclair is controlled by the four sons of founder Julian Sinclair Smith (51% economic and 81% voting control collectively), which has kept it out of the S&P indexes. It's not just passive investors that Sinclair is struggling to attract. SBGI shares are down 30% from their March 2017 highs and are flat since mid-2013, reflecting negative sentiment toward the broadcast industry, concerns over the Company's relations with Fox (which appear overblown), and selling pressure related to a pending merger. Sinclair (\$3B market cap, \$6B EV) is awaiting regulatory approval to complete the transformative acquisition of Tribune Media for \$6.3B. Sinclair is acquiring Tribune at a bargain price (~6x core EBITDA), which could be ~20-40% accretive to FCF and nearly double Sinclair's scale. In addition to realization of merger synergies, growing broadcast retrans fees could lead to a re-rating of SBGI shares in the coming years. Even conservatively assuming <1% annual core advertising growth and valuation multiple contraction to 6.5x EV/EBITDA (2020/21 avg.), or 7x FCF, we derive a year-end 2020 intrinsic value estimate in excess of \$47 per share. Additional long-term upside opportunities include regulatory reform, incremental M&A/accretive capital deployment, successful development of nascent cable/multicast channels, and the deployment of a new broadcast technology standard (ATSC 3.0).

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