U.S. Asset Managers Still Facing a Difficult Future

Poor relative active investment performance and growth of low-cost index-based products continue to make organic growth challenging.

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Executive Summary

Since the presidential election, the prospects of easing regulation and lower corporate taxes have lifted the shares of the U.S.-based asset managers. However, we think the industry's path forward is only marginally better, as most of the long-term trends negatively affecting the group are still in place. As we look forward, we believe investors should focus on the following themes for the traditional asset managers: 1) a weaker regulatory environment for financial services firms; 2) distribution channel disruption on the retail-advised side of the business; 3) continuation of the ongoing shift from active to passive products; 4) greater focus on relative fund investment performance and fees; 5) the inevitability of industry consolidation; and, 6) U.S. corporate tax reform. We expect the Trump administration, in conjunction with a Republican-led Congress, to curtail regulation affecting the financial services sector. But this will do little to alter the long-term trends affecting the asset managers. Poor relative active investment performance and the growth of low-cost index-based products continue to make organic growth challenging, leaving the group dependent on market gains to drive asset levels higher. Rising interest rates will only compound the problem for firms with large retail fixed-income platforms, as market losses on bonds will only amplify fund redemptions. With fees and performance under greater scrutiny, the industry is ripe for fee and margin compression as active asset managers are forced to narrow the spread between the management fees charged for their funds and fees being charge by index-based products, at the same time spending more heavily to improve performance and enhance distribution. Given this environment, we recommend long-term investors focus on wide-moat-rated BlackRock, the leading provider of exchange-traded funds (garnering more than 80% of its AUM from institutional clients), and wide-moat T. Rowe Price, which has the best and most consistent active investment performance (and derives two thirds of its AUM from retirement products).

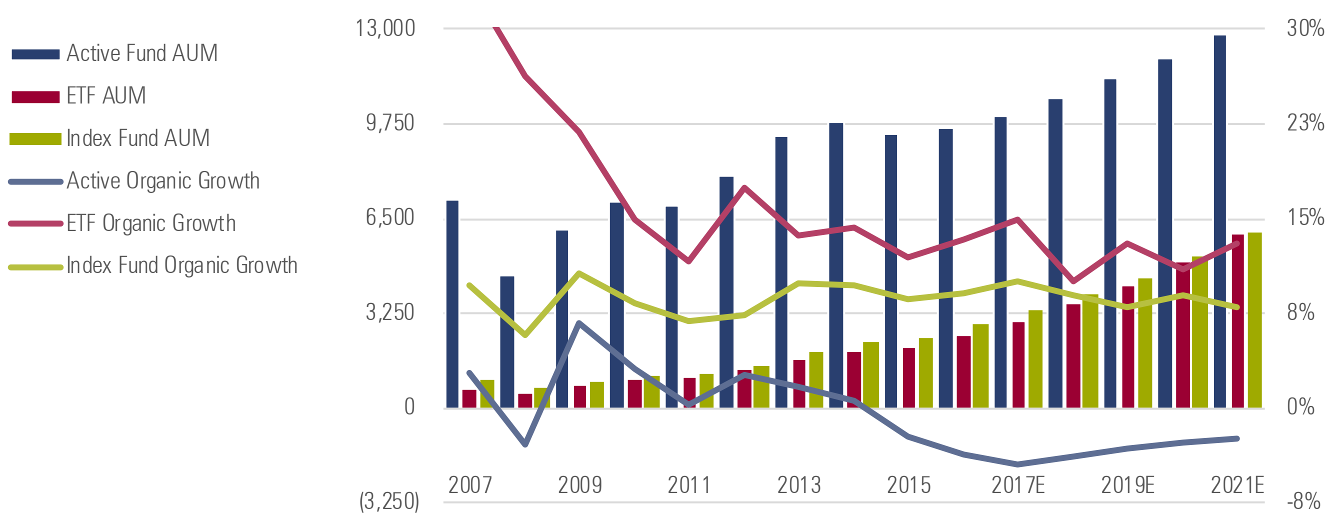
Companies Mentioned

Name/Ticker	Economic Moat	Moat Trend	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Credit Rating	Market Cap(Bil)
BlackRock BLK	Wide	Positive	USD	410.00	384.98	Medium	★★★	AA-	63.27
T. Rowe Price TROW	Wide	Stable	USD	77.00	69.86	Medium	★★★	N/A	17.01
Eaton Vance EV	Wide	Stable	USD	40.00	43.22	Medium	★★★	A-	4.94
Invesco IVZ	Narrow	Positive	USD	35.00	32.00	Medium	★★★	A-	13.14
Affiliated Managers Group AMG	None	Positive	USD	185.00	167.68	Medium	★★★	BBB+	9.21
BlackRock BLK	Wide	Positive	USD	410.00	384.98	Medium	★★★	AA-	63.27

Key Takeaways

- Trump presidency is no panacea for asset managers. While Republicans will have control over the U.S. Securities and Exchange Commission and Department of Labor, and are expected to weaken existing rules and limit future regulation, it will do little to alter the long-term trends affecting the industry.
- Passive will continue to grow at the expense of active. The amount of capital invested in index funds (including both flows and market gains) more than tripled to $2.9 trillion during the past decade, while passive ETFs increased nearly six-fold to more than $2.5 trillion and the amount of capital held by actively managed funds increased just 50%. We expect this trend to continue the next five years.

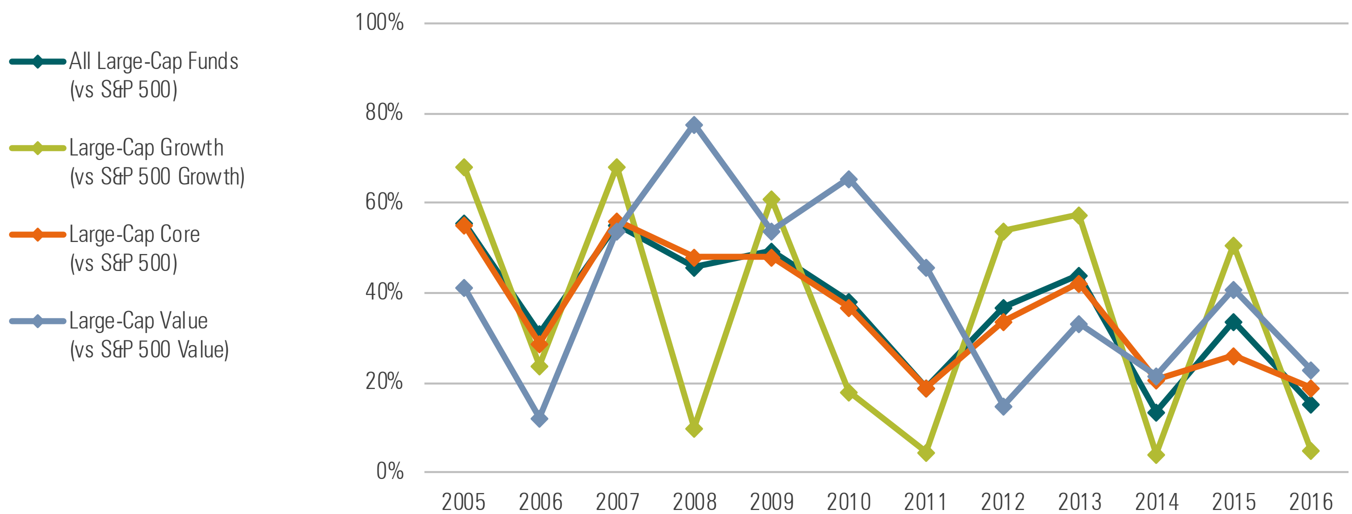
Exhibit 1 Active and Passive AUM (in USD Bil) and Organic Growth for U.S. Open-End Funds & ETFs (2007–21E)



Source: Morningstar Direct-U.S. Open-End & ETF (excluding Money Market and Fund of Funds) historical data

- Passive generating most of the industry's flows. Index funds and passive ETFs generated strong flows in 2016, with index funds pulling in $220 billion and passive ETFs picking up $280 billion in net flows. During 2012-16 and 2007-16, respectively, index funds generated annual organic AUM growth at an 8.9% and 8.6% CAGR, while passive ETFs produced 14.1% and 17.7% annual rates of organic growth.
- Active fund flows to remain historically weak. While the organic CAGR for actively managed fund AUM was -0.3% and 0.8%, respectively, during the past 5- and 10-year periods, we think either rate of annual growth would be ambitious going forward, especially with interest rates expected to rise.
- Lack of outperformance plagues active equity fund managers. Actively managed U.S. large-cap equity funds, which represent 75% of the AUM invested in active U.S. equity funds and make up the majority of most asset managers' equity AUM, have struggled to beat their benchmarks the past decade. At the end of June 2016, less than 10% and 15% of active large-cap managers were outperforming their benchmarks over the previous 5- and 10-year time horizons, respectively

Exhibit 2 Percentage of Actively Managed U.S. Large-Cap Equity Funds Outperforming S&P Benchmarks Annually (2005–Mid-2016)



Source: S&P Indices Versus Active Funds (SPIVA) U.S. Scorecard–Mid-Year 2016

- Performance and fees will dictate future distribution. The Department of Labor's fiduciary rule has put fees and performance under greater scrutiny. Broker-dealer and advisory networks are already culling platforms of poorer-performing (and higher-costing) products, and fees have come under pressure. The industry will also need to spend more to produce better investment results to stay relevant.
- U.S. corporate tax reform could offer some relief. Lower corporate tax rates would offset some of the impact margin compression will have on earnings, with moatier firms with higher tax rates—like T. Rowe Price and wide-moat Eaton Vance—benefitting the most. A tax repatriation holiday would benefit firms with excess capital trapped overseas—like wide-moat Franklin Resources and BlackRock.

Exhibit 3 Tax Rate Sensitivity Analysis for Morningstar U.S.-Based Asset Manager Coverage

	Moat	% U.S. Income	Current FVE	FVE @ 15% Rate	% Increase	FVE @ 20% Rate	% Increase	FVE @ 25% Rate	% Increase
T. Rowe Price Group	Wide	95.0	77.00	100.00	29.9	95.00	23.4	90.00	16.9
Eaton Vance	Wide	95.0	40.00	52.00	30.0	49.00	22.5	46.00	15.0
Federated Investors	Narrow	97.0	28.00	36.00	28.6	34.00	21.4	32.00	14.3
Cohen & Steers	Narrow	88.0	37.00	46.00	24.3	44.00	18.9	42.00	13.5
Janus Capital Group	Narrow	90.0	14.00	17.10	22.1	16.40	17.1	15.70	12.1
Waddell & Reed Financial	Narrow	95.0	19.00	23.00	21.1	22.00	15.8	21.00	10.5
BlackRock	Wide	70.0	410.00	497.00	21.2	475.00	15.9	453.00	10.5
Affiliated Managers Group	None	70.0	185.00	220.00	18.9	212.00	14.6	204.00	10.3
Invesco	Narrow	55.0	35.00	41.00	17.1	39.50	12.9	38.00	8.6
Franklin Resources	Wide	58.0	37.00	43.00	16.2	41.50	12.2	40.00	8.1
Legg Mason	Narrow	68.0	38.00	43.00	13.2	41.50	9.2	40.00	5.3

Source: Morningstar data and estimates; company filings

- Industry consolidation is inevitable as asset managers adjust to the new world order. We expect to see consolidation both internally and externally as fund companies consolidate funds to increase scale and eliminate underperforming offerings (internally), and as medium-size to large managers look to increase scale and product breadth (externally), with most of our coverage being buyers rather than sellers.
- BlackRock and T. Rowe Price are best positioned for long-term investors. BlackRock is the leading provider of ETFs and garners more than 80% of its AUM from institutional clients, insulating it from some of these trends, and T. Rowe Price sources two thirds of its AUM from retirement-based products and has the best and most consistent active fund performance, giving it a leg up over peers.
- Market dislocations can provide trading opportunities. We believe the best time to buy the asset managers is during a market downturn. Our long-term picks—BlackRock and T. Rowe Price—rarely get cheap, though, opening the door for second-tier picks—like Eaton Vance, narrow-moat Invesco, and Affiliated Managers Group—that can be picked up at reasonable valuations during market dislocations.

Major Policy Changes Will Not Alter Long-Term Trends Affecting the U.S.-Based Asset Managers

Given the change in leadership that has taken place in Washington, D.C. this year (with the Republicans in control of the House of Representatives, the Senate, and the White House for the first time in a decade), we expect to see major changes in regulatory and fiscal policy. A deeper look at the U.S.-based asset managers is warranted, with the following issues likely to have an impact over the next several years on the traditional managers we cover:

1. A weaker regulatory environment for financial services firms;
2. Distribution channel disruption on the retail-advised side of the business;
3. Continuation of the ongoing shift from active to passive products;
4. Greater focus on relative fund investment performance and fees;
5. The inevitability of industry consolidation; and,
6. U.S. corporate tax reform.

The regulatory environment is expected to become more favorable to the traditional U.S.-based asset managers. However, changes on that front are unlikely to alter the long-term trends—from a disruption of the retail-advised distribution channel (accelerated by the Department of Labor's fiduciary rule) to the ongoing shift from active to passive products (which is being driven by poor relative fund investment performance and a widening spread in the fees being charged for active products relative to passive offerings)—that are affecting the industry. We expect these trends to lead to an extended period of fee and margin compression for the industry as active asset managers are forced to reduce fees and spend more heavily on talent to improve investment performance and enhance distribution.

Another byproduct of this environment will be industry consolidation, both internally (as fund companies consolidate funds to increase scale and eliminate underperforming offerings) and externally (as medium-size to large managers increase their scale and product breadth), with most of our coverage being buyers rather than sellers. As for fiscal policy, lower corporate tax rates could offset some of the impact fee and margin compression will have on earnings. The biggest beneficiaries will be moatier firms with higher effective tax rates—like Eaton Vance (with an expected average tax rate of 37.9% going forward) and T. Rowe Price (37.5%)—as well as firms with large amounts of excess capital trapped overseas—like Franklin Resources—should there be a tax repatriation holiday.

With all of this in mind, we recommend long-term investors focus on BlackRock, the leading provider of ETFs, which also garners more than 80% of its AUM from institutional clients, and T. Rowe Price, which has the best and most consistent investment performance and derives two thirds of its AUM from retirement-based products. The two firms are not only better positioned competitively, but also have more room to give up margin to generate growth, with BlackRock and T. Rowe Price both closing out 2016 with operating margins of 41%, compared with the group averaging around 28%.

As BlackRock and T. Rowe Price have traditionally traded at premiums to the group, finding good entry points can be difficult. We believe the best time to buy the U.S.-based asset managers tends to be during market downturns, as the group will generally trade down harder than the market, with their price/earnings multiples looking far more attractive on a relative historical basis. We would also note that during these periods of market dislocation investors have had success finding greater value in some of the second-tier names in the group—like Eaton Vance, Invesco, and Affiliated Managers Group.

We Expect a Weaker Regulatory Environment for Financial Services the Next Several Years
As we noted in our initial response to the U.S. election results back in November, the political environment in Washington, D.C. had shifted far enough to the right for investors to see a weakening of many of the regulations put in place following the 2008–09 financial crisis, including major changes to the Dodd-Frank Wall Street Reform and Consumer Protection Act, the next several years. President Trump started the ball rolling at the beginning of February when he signed two executive orders affecting the Financial Services sector. The first instructed the Treasury secretary to ensure that existing rules conformed to his administration's goals and provided the Treasury Department with the authority to restructure provisions enacted under Dodd-Frank. The second order directed the Labor Department to examine its fiduciary rule, which was slated to go into effect in April of this year.

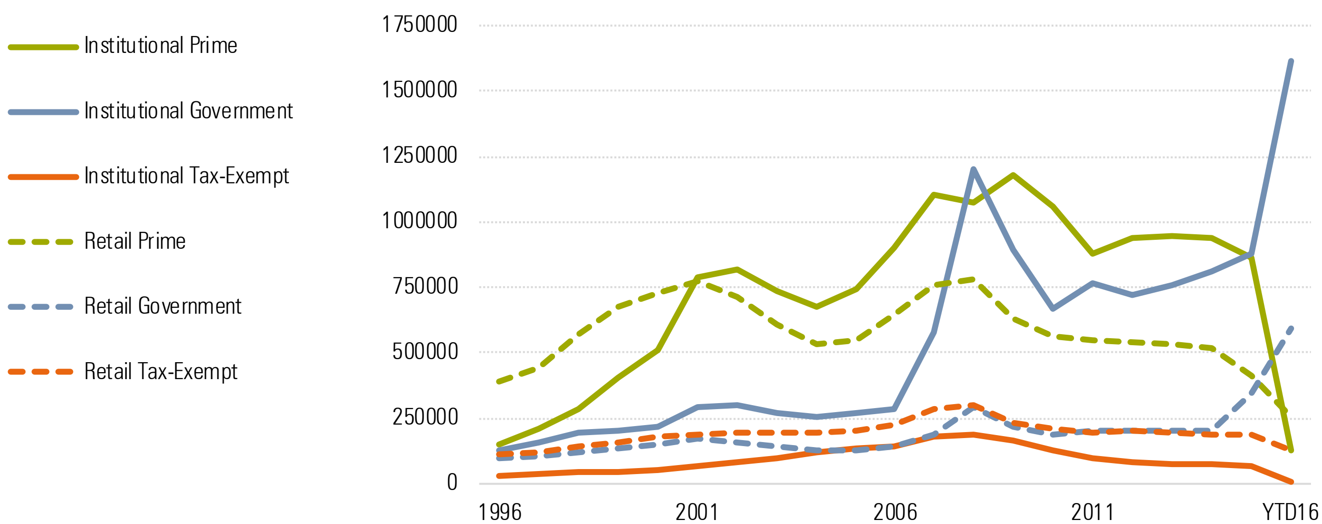
While this made for a great photo opportunity for the administration, and led to another rally in the shares of financial services stocks (with the first taking place right after the November election), we caution investors that efforts to repeal or replace either Dodd-Frank or the Department of Labor fiduciary rule will be far more difficult to achieve in the near term. The Labor Department has already formally proposed a 180-day delay to the effective date of its fiduciary rule, but repealing it could prove difficult. The regulation itself was not created through an executive order or an act of Congress, but through a formal rule-making process within the Department of Labor, so revising or repealing the rule would require going through another formal rule-making process. We should also note that the benefits of any changes that do come about from tinkering with Dodd-Frank or the Department of Labor fiduciary rule may not match the expectations that have been built into the shares of the affected firms.

Looking back over the past eight years, the U.S.-based traditional asset managers did not see nearly as much of an increase in regulatory oversight as the banks and insurance companies, whose balance sheet-driven business models imploded and nearly took the economy down with them during the financial crisis. That said, asset managers have seen regulatory enhancements that have impacted some aspects of their businesses. The following initiatives stand out among the various rules and industry reforms (some of which are interrelated) introduced by different regulatory bodies the past eight years: money market reform; stress tests and liquidity disclosures for funds; non-bank SIFI designations; increased oversight of distribution remuneration; and, the Department of Labor fiduciary rule.

Money Market Reform

Designed to be cash management tools for individuals and institutions, money market funds pay distributions based on prevailing short-term interest rates while keeping a stable net asset value of $1 per share. On Sept. 16, 2008, the Reserve Primary Fund lowered its NAV to $0.97—essentially "breaking the buck"—due to the fund's exposure to collapsing Lehman Brothers debt. This created the potential for a "bank run" on money market funds, with investors fearing that other funds would also break the buck. After another money market fund announced it would be liquidating because of a rash of redemptions, the U.S. Treasury stepped in on Sept. 19, 2008, announcing a temporary guaranty program for all money market funds regulated under Rule 2a-7 of the Investment Company Act of 1940 that maintained a stable NAV of $1 and were publicly offered and registered with the SEC. The program was designed to last three months to a year. The regulators later moved forward with amendments to Rule 2a-7 (adopted on Jan. 27, 2010) aimed at tightening credit quality, easing liquidity constraints, and enhancing redemption capabilities, all while eliminating the need for the regulators to step in and backstop the industry during times of crisis.

Exhibit 4 Total Net Assets by Product Type: Institutional and Retail Money Market Mutual Funds—1996 to 2016 (YTD)



Source: Investment Company Institute

Although these reforms tackled most of their concerns, the regulators introduced additional rules for prime institutional money market funds (which invest primarily in corporate debt), perceiving them to be riskier than either government funds (which invest in U.S. government and municipal securities) or retail money market funds. These regulations, adopted in July 2014 with a two-year implementation period, required providers of prime funds to abandon their stable NAV in favor of a floating NAV. It also allowed them to impose liquidity fees of up to 2%, or to temporarily block investors from redeeming shares of prime institutional money market funds when their liquidity falls below certain levels. This led to a collapse of the prime money market fund segment, which at the end of 2013 had more than $1.4 trillion ($950 billion institutional/$536 billion retail) of AUM, with total money market fund assets standing at $2.7 trillion ($1.8 trillion institutional/$937 billion retail), according to data from the Investment Company Institute. By the end of last year, AUM in prime money market funds dropped to $376 billion ($124 billion institutional/$252 billion retail), even as total money market fund assets remained stable at $2.7 trillion.

That said, money market reform has had an impact on only a handful of firms in our coverage. BlackRock remains the largest provider of money market funds among the traditional asset managers we cover and the second-largest money fund provider in the United States, with just over $400 billion in AUM at the end of 2016, equivalent to 8% of the company's $5.147 trillion in managed assets. The firm continues to be a consolidator of money market assets, most notably picking up $87 billion in AUM from Bank of America's Global Capital Management group in November 2015, but still caters primarily to institutional investors. Not unlike the rest of the industry, BlackRock has seen a rather large shift of AUM out of its prime money market funds into government funds (which generate lower fees) following the regulatory changes that took effect this past year, but has also picked up share in the process.

Federated Investors, which is the second-largest purveyor of money market funds in our coverage, with more than $250 billion in AUM (equivalent to 69% of the company's $365 billion in managed assets), has seen a similar decline (and concurrent rise) in its prime (government) fund AUM. Given the larger impact Federated's money market AUM (which generated 45% of the firm's revenue in 2016) has on its overall results, a large shift to lower fee-generating government funds will have some impact on revenue in the near term. That said, it is unlikely to rise to the level that fee waivers have had on the company's top- and bottom-line the past eight years. Fee waivers have been required in the post financial crisis period in order to keep fund costs from driving yields on certain money market funds (which have been at historic lows) into negative territory. During 2009–16, fee waivers wiped out $2.2 billion in total revenue and more than $600 million in operating income. For a firm that has traditionally relied on the excess cash flows produced by its money market operations to fund growth of its equity and fixed-income operations (both internally and via acquisitions), fee waivers have crimped its ability to expand as well.

Stress Tests and Liquidity Disclosures for Funds

At the tail end of 2014, the SEC unveiled proposals for stress tests and liquidity disclosures for open-end mutual funds and ETFs that they believed would help the industry better manage investment risks. The regulators felt that by subjecting individual funds to stress tests they would be better able to survive a crisis, having already articulated to investors how they could be dismantled in the event of a major disruption in their business. The end game for the regulators (much as they did with money market reform) was to reduce the risk of investor redemption requests being halted in mutual funds and ETFs during a crisis due to poor liquidity management.

The SEC's proposals required funds to maintain a reserve of liquid assets that could (within three days) be turned into cash to meet ongoing redemption requests. The belief was that these highly liquid assets would act as a buffer, providing funds with easy access to cash during times of market stress. The industry pushed back hard against this proposal, noting that it not only created an added "cash drag" on investment performance but would limit investment selection in portfolios. The SEC also planned to require funds to estimate how many days it would take to sell off each of their portfolio holdings. This proposal received pushback as well from the industry, with participants noting that no manager could with any accuracy predict how long it would take to sell every stock or bond they owned, as trading liquidity can vary in different market conditions, with times of market stress further complicating things.

The final rules (released in October 2016) offered some concessions to the industry, giving funds more flexibility to comply with the three-day rule during times the requirement conflicted with its ongoing investment strategies (as long as it had policies in place to meet the standard). As for the estimate of how long it would take to sell individual holdings, the SEC also scaled back its requirements, allowing funds to estimate the liquidity of a group of similar assets, such as emerging-market stocks or investment-grade municipal bonds, as opposed to individual securities themselves. The final rules also required funds to classify investments into the categories of highly liquid, moderately liquid, less liquid, and illiquid, and imposed a 15% cap on the amount of assets in a fund that can be deemed illiquid.

The agency did, however, defer action on a separate plan to regulate the use of derivatives in funds and carved out significant exemptions for ETFs. In particular, ETFs that redeem in-kind (or provide securities rather than cash during redemptions), and provide daily portfolio information, were exempted from the highly liquid reserve and liquidity classification requirements applied to mutual funds. While ETFs are expected to face liquidity risk management requirements specifically tailored to their structure, it may take some time with the focus turning to deregulation under a Trump administration and Republican-led Congress. Overall, the new rules from the SEC ended up being slightly less onerous for the industry, with everyone basically in the same boat when it comes to the liquidity requirements. While it will spur some operational changes (adding another layer of oversight and costs) within the U.S.-based asset managers in the near term, its unlikely to alter the competitive positioning of any of these firms.

In the meantime, the Financial Stability Board, which makes recommendations for the global financial system, has also taken up the fight for fund liquidity, proposing policy recommendations in the summer of 20016 aimed at addressing the financial stability risks that are associated with the mismatch between liquidity of fund investments and the redemption terms and conditions for fund units, the leverage that exists within investment funds, the operational risk and challenges in transferring investment mandates during periods of stress, and the increased use of securities lending by asset managers and funds.

Non-Bank SIFI Designations

One of the key objectives of the Dodd-Frank Wall Street Reform and Consumer Protection Act was a call for enhanced monitoring of systemic risk and the supervision of systemically important financial institutions, or SIFIs, in the aftermath of the 2008–09 financial crisis. By mitigating systemic risk, the regulators believed they could create an environment where the collapse of one institution in a liquidity crisis would not drag down other financial institutions with it. While the Financial Stability Oversight Council initially focused on the banks when handing out SIFI designations, they eventually turned to insurance companies and other non-bank financials. The asset managers saw the first shot over the bow in late 2013, when the Office of Financial Research put out a report highly critical of the industry, which recommended that the industry be subjected to greater oversight, given their belief that these firms could pose a risk to the broader financial system.

That said, the OFR report glossed over the fact that asset managers act as agents for investors, and are not actually in possession of the capital being invested. The OFR also got hung up on the notion of "herding"—too many managers buying and selling the same securities at the same time—which they believed had the potential to blow up a firm (and potentially a market) when those securities collapsed. The asset management industry (as well as the SEC) reacted negatively to the OFR's report, noting that the traditional asset managers were unlikely to pose a danger to the financial stability of the markets because they do not take deposits, do not guarantee returns and do not face the risk that the sudden failure of a counterparty would take down multiple managers (let alone the market). After more than a year of lobbying, the industry succeeded in shifting the focus of the regulators to potentially risky products and activities (particularly those relying on leverage) as opposed to individual firms.

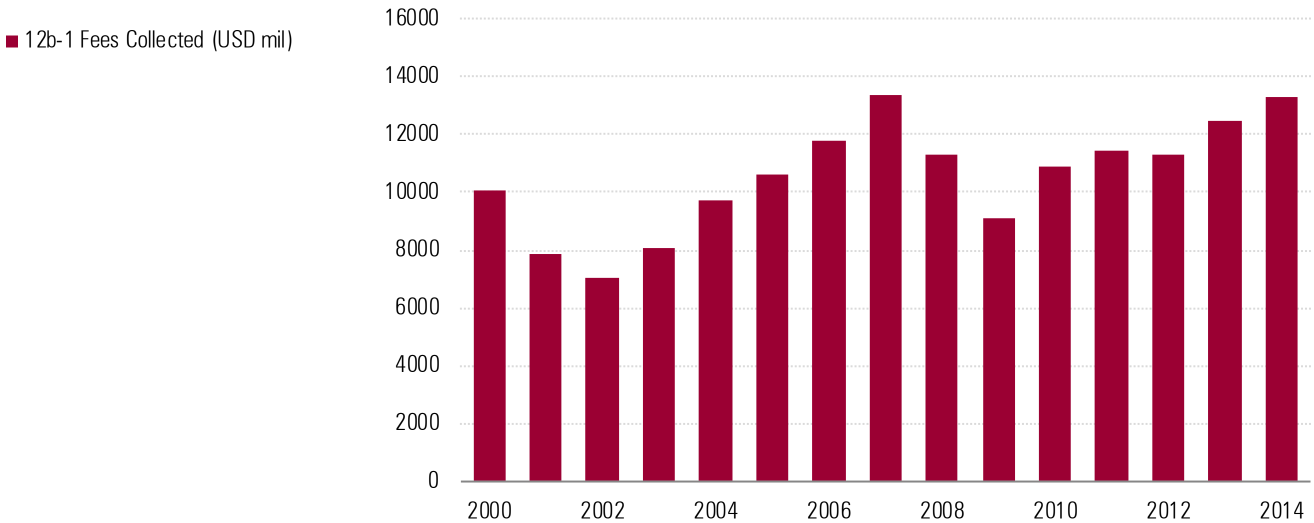
Increased Oversight of Distribution Remuneration

In the United States, mutual fund shares are purchased and sold through a variety of different distribution channels. including independent and regional broker-dealers (LPL Financial, Edward Jones, Ameriprise Financial and Raymond James), the large wirehouses (Bank of America/Merrill Lynch, Morgan Stanley, UBS and Wells Fargo), discount brokerages (Charles Schwab and TD Ameritrade), banks and wealth management firms (JP Morgan, Northern Trust, and BNY Mellon), and independent or affiliated financial planners and insurance agents—not to mention from a fund company directly. Nearly all of these different distribution channels involves the use of an intermediary—be it a broker-dealer, an agent or an advisor—between the investor and the fund manufacturer. The vast majority of fund manufacturers distribute their shares through intermediaries (known as third-party distributors), and most fund investors buy shares through intermediaries.

There are several ways for the distributors of mutual funds to get paid—from sales charges (commissions) and trailer fees (like 12b-1 fees) that are deducted from investor assets to compensation that is received directly from the asset management firms (including revenue share agreements, up-front fees and ongoing marketing support payments). The traditional U.S.-based asset managers and distributors have so far escaped what has been an aggressive regulatory overhaul of fee-sharing arrangements in other parts of the world, but there have been some shots across the bow.

Aside from the scrutiny placed on commissions and other fees (on the part of broker-dealer and advisory networks) as a result of the Department of Labor's fiduciary rule (discussed in more detail in the next section), the SEC has paid a lot of attention to the use of 12b-1 fees, which are used to recoup expenses associated with marketing, distribution and/or services provided to fund investors. The fee is limited to 100 basis points annually, with the marketing and distribution portion of the fee capped at 75 basis points, and the service fee portion limited to 25 basis points. During 2000–14, mutual fund investors paid around $10.5 billion annually on average in 12b-1 fees, so it's no surprise to see them on the SEC's radar.

Exhibit 5 Mutual Fund 12b-1 Fees Paid by Investors Annually (USD Mil), 2000–14



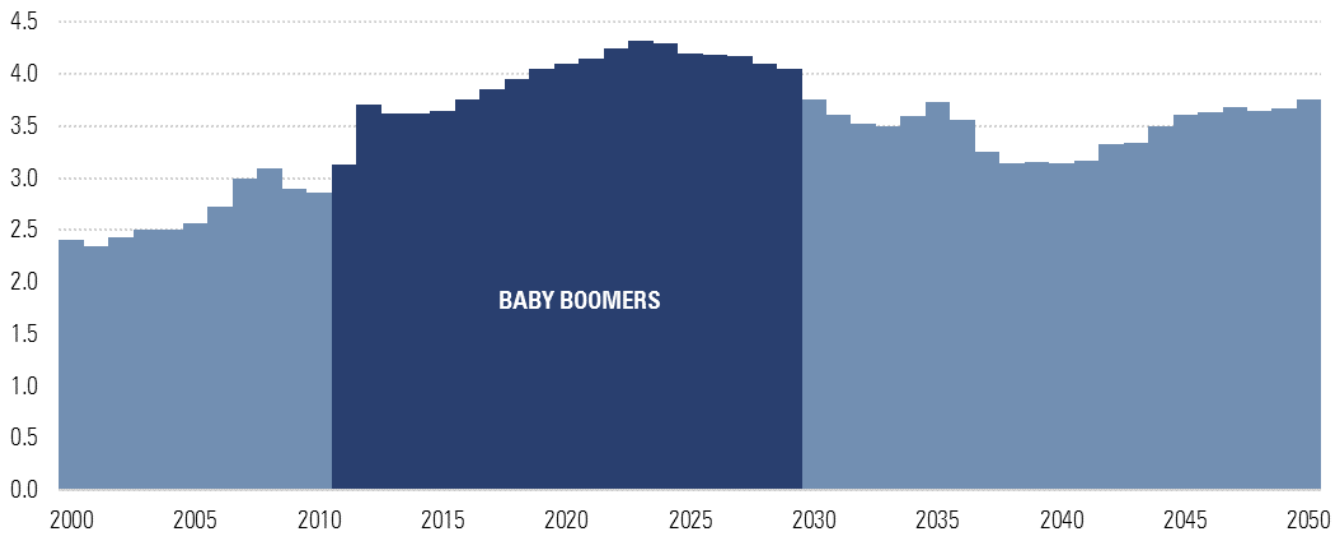
Source: Morningstar Direct

While the SEC has considered proposals over the years that would have limited or even eliminated the use of 12b-1 fees, they've stopped short of doing anything on the regulatory front. What they have done, especially in the aftermath of the financial crisis, has warned broker-dealers and advisors to pay more attention to these fees, and when necessary initiated enforcement actions against firms believed to have violated the rules surrounding the use of 12b-1 fees. Although the adoption of the Department of Labor's fiduciary rule is expected to curb the collection and use of these fees going forward, with some broker-dealers and advisor networks already moving clients out of share classes carrying trailer fees, we expect the SEC to continue monitoring them. That said, we'd be highly surprised to see any 12b-1 fee reform proposals (or enhanced enforcement actions) brought to the table during a Trump administration.

The Department of Labor Fiduciary Rule

The Department of Labor's fiduciary rule, finalized in April 2016 (and set to take effect in April 2017), expanded the "investment advice fiduciary" definition under the Employee Retirement Income Security Act of 1974 , or ERISA, to Individual Retirement Accounts being serviced by broker-dealers and advisors (not already operating under a fiduciary standard). The rule effectively changes the standard of care for retirement savings advice from a suitability standard (which requires brokers/advisors to make recommendations that are suitable for a client based on that client's personal situation) to a fiduciary responsibility (which requires advice to be in the best interest of the client with brokers/advisors now required to put a client's interest first when making investment decisions). Strictly speaking, the rule applies more to broker-dealers and advisors than it does to the asset managers, but the impact on the fund manufacturers, which rely on these retail-advised channels to maintain a significant portion of their retail AUM, should not be underestimated by investors.

Exhibit 6 Number of Americans Expected to Reach Age 65 (in Millions), 2000–50



Source: U.S. Census Bureau

The Department of Labor fiduciary rule came about because the United States is facing a large rollover phenomenon as the baby boomer generation (born between 1946 and 1964 and representing close to 20% of the U.S. population) moves from their working years to their retirement years, and starts rolling over funds held in defined-contribution plans—like 401(k)s—into IRAs. From a data perspective, Cerulli Associates notes that the U.S. IRA market had $7.3 trillion in AUM at the end of 2015. They expect the market to surpass $11 trillion by 2021, aided in a large part by IRA rollovers. At the onset, we expect the adoption of the Department of Labor fiduciary rule to affect around $3 trillion of IRA assets handled by broker-dealer and advisory networks that aren't already being managed under fiduciary standards.

Rollover contributions from DC plans to the IRA market totaled close to $400 billion in 2015. Cerulli estimates that 57% (or $226 billion) of rollovers in 2015 ended up in advisor-intermediated relationships, with the other 43% ($171 billion) going into self-directed IRAs. Individuals aged 60–69 accounted for 37% (or $147 billion) of the rollovers that were made during 2015, with another 25% ($99 billion) coming from people in the 50–59 age bracket. Cerulli expects annual IRA rollovers from DC plans to increase at least 5% annually during the next five years, exceeding $500 billion in 2021, with the last of the baby boomer generation reaching 65, which is generally viewed as a key retirement age, in 2029.

The biggest concern the Department of Labor had with regards to these potential rollovers was that broker-dealers and advisors, dealing with hundreds of billions of dollars of annual inflows, would put clients into mutual funds and other products that paid them the most rather than what was in the best interest of clients. While the Department of Labor fiduciary rule does not ban commission-based products or 12b-1 fees, it has made it much more difficult for broker-dealers and advisors to rely on them. Some broker-dealers and advisor networks have already moved clients out of fund share classes carrying these trailer fees, and the expectation is that this will continue, especially as these distribution networks finalize the strategies they will follow in a post-Department of Labor fiduciary rule market.

While the rule doesn't fully take hold until April, broker-dealer and advisory networks have (for much of the past year) been working to figure out which business model—fee- or commission-based—would work out best for them in the long run. The primary benefits of an adoption of an all fee-based model include potentially higher revenue yield and the avoidance of a lot of future class-action litigation. The main drawback is an increased risk of losing assets as the rationale for converting from commission- to fee-based structures is not compelling enough to convince clients and/or advisors, with one or both severing their relationship to the firm. As for maintaining commission-based fee structures, the primary benefit is less disruption to client and advisor relationships, while the drawbacks include more pervasive changes to business operations (such as creating procedures to mitigate the conflicts of interest associated with variable payments like commissions) and greater exposure to class-action lawsuits.

Exhibit 7 Major Broker-Dealers and Advisor Networks (by Head Count) Following Different Strategies in Post-Department of Labor Fiduciary Rule Environment

Keeping Commissions		Straddling the Line		Banning Commissions	
Morgan Stanley	15,850	LPL Financial	14,200	Merrill Lynch	16,000
Wells Fargo	15,000	Edward Jones	14,000	JP Morgan	2,500
Ameriprise Financial	9,750	Advisor Group	5,000	Commonwealth Financial	1,650
Cetera Financial Group	9,000				
Raymond James Financial	7,150				
Cambridge Associates	3,800				
National Planning Holdings	3,500				

Source: Ignites, Morningstar estimates

Among the larger wirehouses and banks/wealth management firms, Merrill Lynch and JP Morgan have announced that they are moving their retirement accounts to all fee-based account structures, while Morgan Stanley and Wells Fargo have elected to maintain commission-based offerings. We have yet to hear anything concrete from UBS, which has around 7,000 advisors. As for the independent and regional broker-dealers, Ameriprise and Raymond James have chosen to stick with commission-based products, while others like LPL Financial and Edward Jones have suggested more complex approaches.

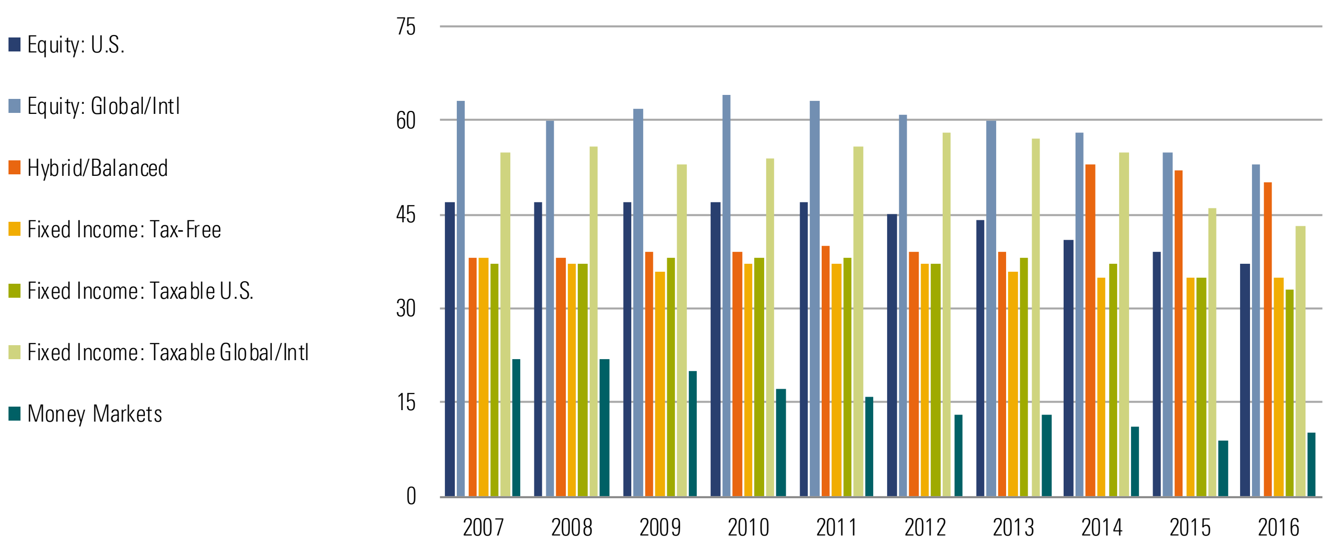
We've also seen proposals for the introduction of new retail mutual fund share classes that are either aimed at allowing brokers that sell mutual funds to determine their own commission structures or that establish more consistent pricing for loads and distribution-related costs. As to the former, American

Funds introduction of a "clean" share class that include management fees and administrative costs, but eliminate 12b-1 fees, would allow brokers to set their own commissions for selling these shares, which should ultimately provide investors with a much better idea of what they're paying to brokers and what they're paying to asset managers for their respective services. On the other end of the spectrum is "T" shares, which have been introduced to offer more consistent pricing for loads and distribution-related costs, with most fund providers leaning toward a 2.5% maximum load and an ongoing 0.25% 12b-1 fee. Contrast this with A shares, which are most commonly used in commission-based structures, where the percentage paid for the front-end load typically falls in a range of 3.75%–5.75% (with loads at the lower end of the range generally attached to bond mutual funds and higher sales charges attributed to equity-based funds) and where the ongoing 12b-1 fee tends to be around 0.25%.

Consolidation and Regulation Have Shifted the Balance of Power in the Retail-Advised Channel

For the U.S.-based traditional asset managers, the balance of power in the retail channel has been shifting to the broker-dealers and advisors for many years, but it hasn't had a negative impact on management fees. While the 2008–09 financial crisis did spark consolidation among many of the broker-dealer and advisory networks selling funds to retail investors, the broader effect was a limitation of the amount of leverage the traditional asset managers had when negotiating payments for shelf space as opposed to an overarching pressure on management fees. While some asset managers still have solid relationships with distributors, it has become a two-edged sword for firms with flows concentrated in a fund over extended periods of time. As for the industry itself, the participants have tended to act as though it is an oligopoly, with a fair amount of price rigidity, despite the industry being highly fragmented. What fee compression we have seen over the years has been more a function of scale, as funds with larger asset bases spread their costs more efficiently over their shares, than anything else.

Exhibit 8 Asset-Weighted Average Industry Management Fee Rates (in Basis Points) for Actively Managed Mutual Funds, 2007–16



Source: Franklin Resources annual reports. The increase in the average rate for hybrid/balanced funds in 2014 reflects the addition of alternative products, while the decrease in the average rate for taxable global/international fixed-income funds in 2015 reflects lower weightings of two large higher fee funds and a higher weighting of a large low fee fund.

Unlike the institutional channel, where fees and performance were long ago put under the microscope by consultants, which acted as gatekeepers for clients—forcing active managers to clearly articulate their investment philosophy and process, as well as provide relevant data analytics related to portfolio construction, risk parameters, attribution analysis, sources of alpha generation, et al, in order to justify their fees—the retail-advised networks have not been as heavily focused on these metrics (as most of their compensation was being generated by loads and ongoing distribution-related fees). With more and more retail-advised accounts moving to fee-based structures, which favor lower cost offerings with benchmark-like or better performance, we have seen a greater use of gatekeepers in the channel. We see the introduction of the Department of Labor fiduciary rule as being an accelerant for this trend, with fees and performance being put under a much stronger microscope than they have ever been before.

When the Department of Labor fiduciary rule was in its earliest stages of development, we noted that the impact on the traditional U.S.-based asset managers was going to be more dependent on the path the broker-dealer and advisory networks took with regards to commission-based products, as well as products with trailer fees, than anything else. As many broker-dealers and advisors were also debating whether to apply the Department of Labor's fiduciary standard to tax-deferred accounts alone or extend the rule across their entire platform, the potential existed for an even greater impact on the business models of the asset managers from the rule than many had originally anticipated. In most cases, broker-dealer and advisory networks were concerned about having two sets of rules—one for taxable accounts and one for tax-deferred accounts—for brokers/advisors establishing client accounts, as well as the how having two sets of rules would play with clients that had both taxable and tax-deferred accounts on their platforms. This decision would ultimately impact the types of fund classes sold and maintained on these networks, as well as how much traction ETFs were likely to gain on each platform.

In our view, the introduction of the Department of Labor fiduciary rule put a much stronger microscope on the management fees being charged and the investment performance being generated (relative to index funds and ETFs) by the fund manufacturers seeking placement on broker-dealer and advisor platforms. These networks have also taken a much harder look at the number and scale of fund offerings on their platforms, as they looked to eliminate funds with smaller overall balances, especially those that have been underperforming, which would become more difficult to justify in a world where a fiduciary standard rather than a suitability standard is the norm. This would also simplify their menu of investment offerings, as well as reduce the costs associated with maintaining their platforms. For broker-dealer and advisory networks that ban commissions and fully embrace fee-based account structures, there will likely be a greater focus on low-cost options like ETFs at the expense of weaker-performing higher-fee generating actively managed funds. Based on our estimates, the revenue yield for fee-based accounts is more than 50% higher than commission-based accounts. While moving an IRA account from a commission-based to a fee-based structure will require documentation detailing why the move is in the best interest of a client, we expect to see the shift to fee-based accounts accelerate.

According to Cerulli Associates, advisors as a group—which includes advisors operating in the wirehouse channel, at national and regional broker-dealers, insurance broker-dealers, retail bank broker-dealers, independent broker-dealers, and as independent and hybrid registered investment advisors—

currently earn around 59% of their average annual revenue from asset-based fees and another third from commissions. Among the different channels, independent RIAs (81%) and wirehouse advisors (67%) earn the largest percentage of revenue from fee-based assets, while insurance broker-dealers (63%) and national and regional broker-dealers (44%) earn a higher percentage from commissions.

Exhibit 9 Advisor Compensation by Channel – 2016

Compensation Type	Wirehouse	National & Regional Broker-Dealer	Insurance Broker-Dealer	Retail Bank Broker-Dealer	Independent Broker-Dealer	Independent Registered Investment Advisor	Hybrid Registered Investment Advisor	All Advisors
Asset-Based Fees	67%	48%	32%	51%	49%	81%	65%	59%
Commissions	31%	44%	63%	40%	41%	3%	26%	32%
Fees for Financial Plans	1%	7%	2%	2%	6%	7%	6%	5%
Annual/Retainer Fees	1%	1%	2%	4%	2%	6%	2%	2%
Hourly Fees	1%	0%	1%	4%	1%	2%	1%	1%
Other Fees	0%	1%	1%	0%	1%	1%	1%	1%

Source: Cerulli Associates – U.S. Advisor Metrics 2016. Average compensation data excludes senior advisors or principals/owners who receive a salary.

Nearly 60% of advisors expect the Department of Labor fiduciary rule to accelerate the shift away from commission-based accounts, as broker-dealer and advisory networks look to simplify their platforms and limit their business risk. This is expected to push the annual revenue contribution from fee-based accounts to 66% on average for all advisors in 2018, with independent RIAs (79%), wirehouse advisors (74%), and hybrid RIAs (71%) garnering the most from these arrangements. Meanwhile, insurance broker-dealers (49%) and national and regional broker-dealers (30%) will earn a significantly lower percentage of revenue from commission-based accounts.

Exhibit 10 Advisor Compensation by Channel – 2018E

Compensation Type	Wirehouse	National & Regional Broker-Dealer	Insurance Broker-Dealer	Retail Bank Broker-Dealer	Independent Broker-Dealer	Independent Registered Investment Advisor	Hybrid Registered Investment Advisor	All Advisors
Asset-Based Fees	74%	60%	43%	60%	56%	79%	71%	66%
Commissions	22%	30%	49%	31%	30%	3%	17%	23%
Fees for Financial Plans	2%	7%	4%	2%	9%	8%	7%	6%
Annual/Retainer Fees	1%	1%	3%	4%	4%	8%	3%	3%
Hourly Fees	1%	1%	1%	4%	1%	2%	1%	1%
Other Fees	0%	1%	1%	0%	1%	1%	1%	1%

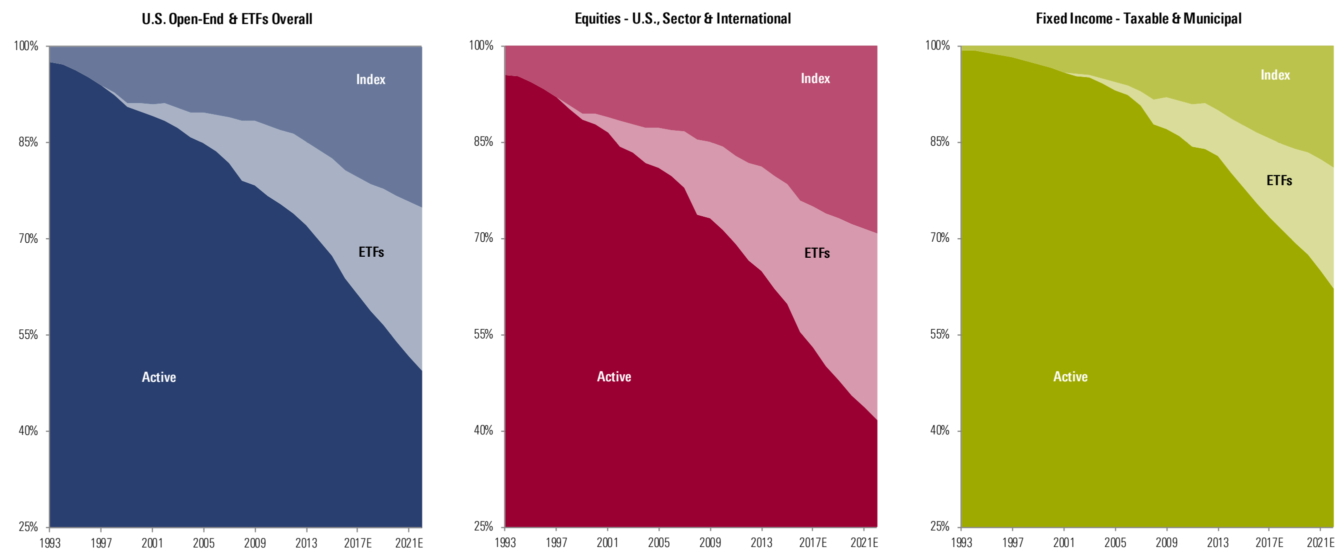
Source: Cerulli Associates – U.S. Advisor Metrics 2016. Average compensation data excludes senior advisors or principals/owners who receive a salary.

If the Trump administration rescinds the Department of Labor fiduciary rule, there will likely be differences between Cerulli's projections and actual 2018 results, but it will do little to alter the trend toward fee-based accounts that has been going on for years. This trend will continue for the simple fact that running accounts on a fee-based basis can be more profitable for advisors in the long run, especially if they can populate accounts with solid performing low-cost products, like ETFs (which provide investors with market exposure at meaningfully lower fees than actively managed funds).

Passive Investment Products Will Continue to Grow at the Expense of Actively Managed Funds

As we noted in our December 2014 Financial Services Observer—titled The ETF Industry has Become Too Big for the Traditional Asset Managers to Ignore—the growth of ETFs in the retail-advised market has not only been spurred on by a secular shift toward passive investing that has been in place for more than two decades, but by a movement on the part of brokers and advisors away from transaction- or commission-based fee structures to ones that are based on the level of managed assets.

Exhibit 11 Active/Passive Breakdown of U.S. Open-End Funds & ETFs based on Total AUM (1993–2022E)

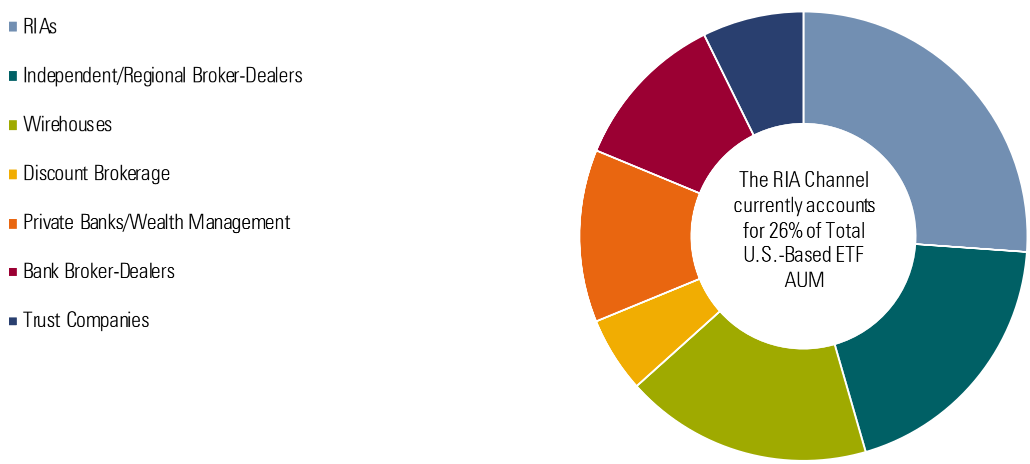


Source: Morningstar Direct- U.S. Open-End & ETF (excluding Money Market and Fund of Funds) Historical Data

The ETF industry was much easier for the active asset managers to ignore a decade ago when it had $432 billion in AUM domestically, accounting for just 6% of total U.S. investment company assets. With more than $2.5 trillion in AUM at the end of last year, accounting for around 17% of U.S. investment company assets, and holding more than $3.5 trillion in AUM worldwide, the ETF industry commands a lot more attention these days. At the end of the third quarter of 2016, registered investment advisors (based on information provided by Access Data/Broadridge) represented the largest U.S. distribution channel for ETFs, accounting for 26% of the industry's $2.5 trillion in ETF AUM. This was up from 20% just two years ago, which makes sense given the propensity of registered investment advisors to use fee-based account structures. Independent and regional broker-dealers—like LPL Financial, Edward

Jones, Ameriprise and Raymond James—were still the second-largest holders, holding sway over 19% of total ETF AUM at the end of September 2016, up from 17% two years prior to that date. As for the four largest wirehouses—Bank of America/Merrill Lynch, Morgan Stanley, UBS and Wells Fargo—they held 18% of total ETF AUM at the end of the third quarter of 2016, up slightly from 17% two years ago.

Exhibit 12 U.S.-Based ETF AUM by Distribution Channel, Third Quarter of 2016



Source: Access Data/Broadridge.

We believe the Department of Labor's fiduciary rule has created an environment where broker-dealer and advisory networks are likely to focus more heavily on passive products—index funds and ETFs—and (to a lesser extent) on active asset managers that have greater scale, established brands, solid long-term performance, reasonable fees, and which are perceived to be safer from a regulatory and legal standpoint, even if there are active products that could potentially produce greater returns.

Advisors have already relied on index-based products like ETFs to gain market exposure and limit costs in client portfolios, as well as handle changes in asset allocation. With many investors paying advisors to not only allocate their assets, but reallocate them when market conditions warrant a change, advisors looking for the cheapest and most efficient way to achieve this end have turned to ETFs. Cerulli Associates recently noted that as a result of the Department of Labor fiduciary rule, 45% of advisors plan to increase their allocation to ETFs, and 31% of advisors plan to increase their allocation to other passive investment products. On the flip side, 27% of advisors noted they intend to decrease their allocation to actively managed funds, and 32% would be decreasing their use of variable annuities.

With that in mind, we expect competition for product placement on the platforms of the broker-dealer and advisory networks to get more intense, with the providers of index funds and ETFs, as well as firms with solidly performing actively managed funds, having a huge leg up over peers. In this environment, the largest providers of retail index funds (which include both index and target-date funds)—Vanguard ($1.947 trillion at the end of 2016), DFA ($308 billion) and Fidelity ($253 billion)—are expected to be in the driver's seat when it comes to gathering index fund AUM, given their scale and product breadth.

Exhibit 13 U.S.-Based Index Fund Retail AUM (USD Bil) by Top U.S. Market Participants (2012–16)

	2012	2013	2014	2015	2016
Vanguard	935.6	1251.6	1493.5	1627.5	1947.7
Dimensional Fund Advisors	165.4	219.2	252.9	256.6	308.2
Fidelity Investments	111.4	146.4	179.3	196.2	253.4
Schwab	28.6	39.4	46.5	47.6	52.7
TIAA-CREF	19.0	26.2	31.1	34.4	44.3
AXA Equitable	26.8	31.7	33.1	32.0	33.1
T. Rowe Price	17.0	22.4	26.7	27.4	31.1
BlackRock	4.5	7.0	11.1	17.6	29.7
Jackson National	10.5	15.9	18.6	21.7	24.9
Northern Trust	13.8	18.1	19.2	19.8	21.1
Total Industry AUM	1449.6	1923.5	2272.2	2433.7	2900.3

Source: Morningstar Direct

That said, we wouldn't rule out Schwab, which has a growing presence in the index fund market and runs a closed network that has been actively courting RIAs; or BlackRock, which has a long successful track record as an institutional index fund manager (with these products accounting for 38% of the firm's $5.147 trillion in AUM at the end of 2016). Going forward, we expect the index fund industry, which expanded at an 8.9% and 8.6% organic CAGR 2012–16 and 2007–16, respectively, to continue to grow organically at an 8%–10% rate annually the next five years.

Exhibit 14 ETF AUM (USD bil) by Top U.S. Market Participants (2012–16)

	2012	2013	2014	2015	2016
BlackRock/iShares	556.7	660.9	759.1	828.5	983.0
Vanguard	245.6	333.9	427.0	483.3	611.8
State Street/SSgA	329.2	391.6	455.3	414.1	501.9
Invesco/PowerShares	70.2	96.9	96.8	97.9	110.4
Schwab ETFs	8.6	16.9	26.9	39.7	59.8
First Trust	8.2	19.7	33.2	42.7	41.0
Wisdom Tree	18.3	34.9	39.3	51.6	39.8
Guggenheim	12.2	21.7	28.5	28.3	31.5
Van Eck	27.7	22.4	20.8	18.9	29.7
ProShares	21.1	27.3	25.1	25.2	26.3
Total Industry AUM	1348.5	1700.3	2005.0	2135.5	2555.1

Source: Morningstar Direct

Not surprisingly, some of the biggest providers of index funds are also the largest providers of ETFs in the U.S. market, with BlackRock/iShares, Vanguard and State Street/SSgA combined accounting for

82% of the market at the end of 2016. These three players have come to dominate the core index-based offerings in the U.S. market, with other existing providers and new entrants having to focus more and more on niche products—like strategic beta and actively managed ETFs—in order to generate growth. With the vast majority of the AUM invested in ETFs in the U.S. market tracking "plain vanilla" indexes, and the largest ETF providers continuing to use their established brands, greater product liquidity, and distribution reach to capture and hold the lion's share of the market, we do not expect the current makeup of the U.S. ETF market—which has been shaped by the ever-increasing size and scale of some of the largest players—to change all that much in the near to medium term.

Unlike the market for index funds, which has not been overly price competitive, the U.S. ETF market has seen a fair amount of price competition, especially during the post financial crisis period. With $224.8 billion in AUM at the end of 2016, the largest ETF in the market is State Street/SSgA's SPDR S&P 500. With an expense ratio of 9 basis points, though, the fund has seen its share of the U.S. ETF market (and Morningstar's U.S. Equity ETF category) decline the past two-plus years from 9.7% (22.6%) to 8.8% (18.9%), even as it increased in size by 24.6%. The rapid growth of lower cost offerings during that time left the fund's organic growth well below those of those comparable funds, as well as industry itself.

Exhibit 15 Top 10 ETFs in U.S. Market by Size and Net Expense Ratio

Top 10 Largest ETF by AUM					Top 10 Lowest Expense Ratio ETFs				
Ticker	Fund Name	4Q16 AUM (USD bil)	% of U.S. ETF Market	Net Expense Ratio (bps)	Ticker	Fund Name	4Q16 AUM (USD bil)	% of U.S. ETF Market	Net Expense Ratio (bps)
SPY	SPDR S&P 500	224.8	8.8	9	SCHB	Schwab US Broad Market	7.7	0.3	3
IVV	iShares Core S&P 500	90.6	3.5	4	SCHX	Schwab US Large-Cap	7.1	0.3	3
VTI	Vanguard Total Stock Market	69.9	2.7	5	IVV	iShares Core S&P 500	90.6	3.5	4
EFA	iShares MSCI EAFE	59.7	2.3	33	SCHZ	Schwab US Aggregate Bond	3.4	0.1	4
VOO	Vanguard 500	56.6	2.2	5	AGG	iShares Core US Aggregate Bond	41.6	1.6	5
VWO	Vanguard FTSE Emerging Markets	43.9	1.7	15	VTI	Vanguard Total Stock Market	69.9	2.7	5
QQQ	PowerShares QQQ	41.8	1.6	20	VOO	Vanguard 500	56.6	2.2	5
AGG	iShares Core US Aggregate Bond	41.6	1.6	5	IUSG	iShares Core US Growth	1.2	0.0	5
VEA	Vanguard FTSE Developed Markets	40.2	1.6	9	IUSV	iShares Core US Value	1.2	0.0	5
IWM	iShares Russell 2000	38.4	1.5	20	SCHA	Schwab US Small-Cap	4.6	0.2	6

Source: Morningstar Direct

BlackRock's iShares Core S&P 500 fund, the second largest ETF in the U.S. market, which recently cut its expense ratio to 4 basis points (from 7 basis points), has been a tough competitor, increasing its AUM by 50% to $90.6 billion during the past two-plus years. This lifted the fund's share of the U.S. ETF market (and Morningstar's U.S. Equity ETF category) from 3.3% (7.7%) at the end of the third quarter of 2014 to 3.5% (7.8%) at the end of 2016. But that was nothing compared with the Vanguard 500 ETF, which grew from $21.8 billion in AUM to $56.6 billion, with an expense ratio of 5 basis points, during the past two-plus years. This helped to lift the fund's share of the U.S. ETF market (and Morningstar's U.S. Equity ETF category) from 1.1% (2.7%) to 2.2% (4.8%) during that time frame.

While the SPDR S&P 500 offers more liquidity than either of its two closest competitors, which has allowed it to maintain an expense ratio of 9 basis points with investors that value liquidity more than cost (as the SPDR S&P 500 is primarily used as a hedging vehicle by many institutional investors), it's expense ratio has created headwinds with more cost-conscious retail investors. Those headwinds are likely to get slightly worse with Schwab dropping the expense ratio on both its US Large-Cap ETF, which tracks the Dow Jones Large Cap Total Stock Market Index, and its US Broad Market ETF, which tracks the Dow Jones U.S. Broad Stock Market Index, down to 3 basis points right after BlackRock cut the expense ratio on its iShares Core S&P 500 fund to 4 basis points in October 2016.

Over much of the past five years, fee cuts from one ETF issuer have generally been followed by cuts by a rival issuer, with those fee reductions tending to happen in relatively short order. This has been more recent, though, as for much of the ETF industry's first two decades there was very little price competition because the largest ETF providers held the lion's share of the market (with the top three issuers controlling more than 90% of the market), even as more competitors entered the fray, and the smallest players in the industry were poorly equipped to compete on price. Much as we've seen with the asset management industry overall, scale became essential for long-term success in the ETF industry.

Exhibit 16 ETF Net Flows and Organic Growth for Top U.S. Market Participants (2012–16)

		2012	2013	2014	2015	2016
Net Flows (AUM bil)	BlackRock/iShares	60.8	41.1	82.6	108.0	106.0
Organic Growth (%)		13.6	7.4	12.5	14.2	12.8
	Vanguard	52.7	55.1	75.8	76.5	94.3
		30.8	22.4	22.7	17.9	19.5
	State Street/SSgA	39.9	13.4	34.5	-24.0	54.7
		15.0	4.1	8.8	-5.3	13.2
	Invesco/PowerShares	7.8	12.3	-6.8	1.4	6.9
		13.8	17.5	-7.0	1.4	7.0
	Schwab ETFs	2.9	6.1	8.8	14.2	16.1
		58.0	70.9	52.1	52.8	40.6
	Total Industry Flows	190.6	187.6	242.2	244.5	287.4
		18.0	13.9	14.2	12.2	13.5

Source: Morningstar Direct

But after BlackRock acquired the iShares ETF business, as part of its 2009 purchase of Barclays Global Investors, Vanguard got even more aggressive on pricing. The firm already had a solid index platform, which helped reduce the costs associated with building out an ETF platform, when it first moved into ETFs in 2001. The fact that Vanguard is structured as a mutually owned organization has also allowed the firm to be far more aggressive on pricing, with its weighted average expense ratio of less than 10 basis points for its line up being among the industry's lowest. While Schwab (at less than 8 basis points) may have a lower weighted average expense ratio than Vanguard, the company's ETFs are sold exclusively on its trading platform, with the firm offsetting the lower fees on its ETF offerings with transaction and portfolio-based fees. Vanguard, meanwhile, continues to benefit from its strong brand recognition with passive investors—something that most managers on the active side of the business do not even come close to possessing—and by wrapping its indexing capabilities into an exchange-traded vehicle Vanguard has been able to penetrate channels where it had historically been sparse.

Not surprisingly, we see Vanguard and BlackRock/iShares as being two of the biggest beneficiaries of the focus that the Department of Labor fiduciary rule will put on low-cost products. The two firms not only control 62% of the U.S. ETF market, but have generated more than 70% of the industry's annual flows the past two years. With some of the largest and cheapest ETF products on the market, we see that trend continuing in an environment where costs are expected to be a driving factor behind product selection. That said, we do expect Vanguard to be far more dominant on the retail side of the business, primarily because the U.S. ETF market has become bifurcated, with BlackRock/iShares maintaining a strong dominant position in the institutional channel, while Vanguard is the leader in retail ETF sales. Although BlackRock/iShares has generated greater absolute flows than Vanguard in each of the past three calendar years, Vanguard has produced superior organic growth. At this point, BlackRock/iShares is growing in line with the industry, which produced an organic CAGR of 14.1% during 2012–16, and we expect that to continue in the near-to-medium term, projecting average annual organic growth in the 10%–14% range. As for Vanguard, we expect the firm to produce ETF organic growth that is 1.5 times greater than the industry's projected rate of growth, much as the company has done during the past five years. While we believe the spread between Vanguard's ETF operations and that of the industry overall will diminish over time, we don't see that happening for quite some time.

With regards to State Street/SSgA, the firm saw a marked improvement in its organic growth last year, but 70% of the company's ETF inflows occurred during November and December (as investors rushed in to capture some of the gains generated by a post-election rally). Despite recording a 13.2% organic growth rate last year with its ETF operations, State Street/SSgA's 6.9% organic CAGR during 2012–16 was less than half the industry's CAGR of 14.1%. With the SPDR S&P 500 accounting for 45% of State Street/SSgA's total ETF operations, the fund will have an outsized influence on flows. The firm also seems to be relying on a size and liquidity argument, on top of the fact that the majority of its customers are institutional clients, to maintain a higher price point on some of its ETFs, which is basically the same argument BlackRock/iShares used all the way up to the point where it cut fees dramatically and launched its Core series of ETFs in October 2012.

As for Invesco, we've always given the firm credit for its PowerShares ETF operations, but don't think the company is quite as advantaged as BlackRock is with iShares. PowerShares is a distant fourth-place provider of ETFs, with $110 billion in AUM at the end of 2016. Its overall share of the U.S. ETF market dipped down to 4% last year, having accounted for 5%–6% of the industry for much of the previous decade, and the firm has faced problems generating consistent flows, with its 6.2% organic CAGR during 2012–16 being slightly worse than State Street/SSgA's results. Not unlike that firm, Invesco has one fund—the PowerShares QQQ ETF—that accounts for a meaningful portion (38%) of its total ETF AUM, which is also used as a hedging vehicle by institutional investors (given that it tracks the Nasdaq 100 TR Index). The PowerShares QQQ also carries an expense ratio of 20 basis points, which is extremely high for an index-based product (but still cheaper than most comparable ETFs). While PowerShares other ETF offerings are more focused on niche product areas, which have been less susceptible to the pricing pressure we've seen with core/index-based ETFs, a flurry of other strategic beta products on the market with lower expense ratios tells us that the firm may need to cut fees to boost organic growth.

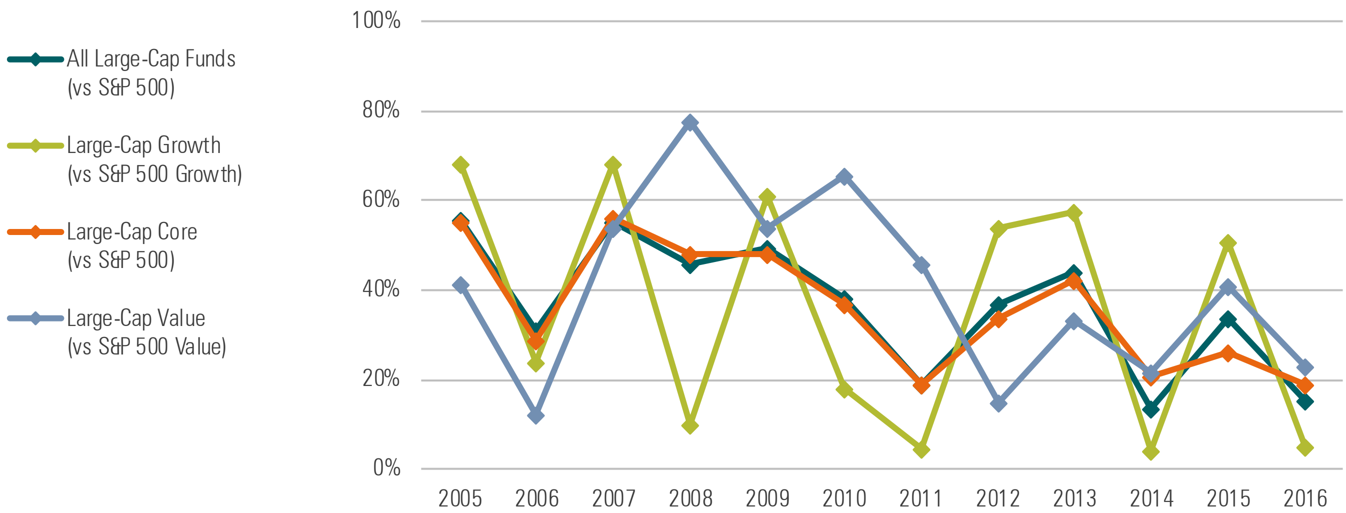
With regards to Charles Schwab, which went from being the 10th- largest domestic provider of ETFs (with $22.9 billion in AUM) at the end of the third quarter of 2014 to the fifth-largest provider (with $59.8 billion in AUM) at the end of 2016, we expect the firm to continue to have the upper hand with its own in-house funds. Schwab operates primarily as a discount broker, with its competitive pricing structure making it an attractive option for self-directed investors looking for low commissions and fees when trading and holding ETFs and other investments. The firm has also been aggressively courting RIAs, providing custody and trading platforms for their businesses. While we believe that the bulk of annual ETF flows will continue to go to the largest ETF providers, we expect Schwab to take its fair share. That said, a continuation of the 54.6% organic CAGR that the firm produced during 2012–16 will be tougher to replicate going forward as the size of its ETF operations, which are limited to its closed network, expands.

The rapid growth of ETFs, and their use as replacements for traditional mutual funds, has raised some concerns for third-party distributors. Even if they're not cannibalizing mutual fund sales, the perception in some distribution channels is that they've had a free ride, with brokerage firms in particular believing they've not been adequately compensated for assisting the rapid growth of ETFs during the past decade. While there has been some movement on this issue in the discount brokerage channel, with Schwab and Fidelity already negotiating fees for access to their platforms, it wasn't until more recently that we've seen action from the more traditional broker-dealer networks. Recent reports suggest that Morgan Stanley has informed ETF providers that they will be subject to "data fees" in exchange for including their ETF products on the company's sales network. While the amounts may seem insignificant, with Morgan Stanley reportedly floating a minimum per-fund expense charge of $10,000 per year, they can serve to squeeze out smaller ETF providers that cannot afford to pay for access. It is also likely to raise the clamor for arrangements like this among other networks, and where feasible could spur the growth of "private-label" ETFs at brokerage firms, which could serve to block out the established players.

Lack of Investment Outperformance and Higher Fees Plague Active Equity Fund Managers

As for active management, especially actively managed equity funds, we see the road ahead as being fraught with far more headwinds than tailwinds. The biggest disruptor to active management during the past decade has been the poor relative investment performance of funds—especially U.S. equity funds, which accounted for 37% of the $9.6 trillion invested in active open-end long-term mutual funds (which excluded money market funds) at the end of 2016. Based on data collected by S&P Dow Jones Indices as part of their S&P Indices Versus Active Funds (SPIVA) U.S. Scorecard project, close to 60% of active large-cap equity managers—which account for three quarters of the U.S. equity fund AUM that Morningstar monitors, as well as an overwhelming majority of the U.S. equity assets managed by the firms we cover—underperformed their benchmarks from the start of 2005 until the middle of last year.

Exhibit 17 Percentage of Actively Managed U.S. Large-Cap Equity Funds Outperforming S&P Benchmarks Annually (2005–Midyear 2016)



Source: S&P Indices Versus Active Funds (SPIVA) U.S. Scorecard – Mid-Year 2016

Given the rally we've seen in the U.S. equity markets post the 2008–09 financial crisis, this has been troubling for active managers, who have been in net outflow mode since 2006. While 2008 was seen as a watershed year for the category, with $122 billion flowing out of actively managed U.S. equity funds in response to the global equity market meltdown, we've seen even worse years of outflows in 2012 ($132 billion), 2015 ($174 billion) and 2016 ($264 billion), which was the worst year on record for outflows.

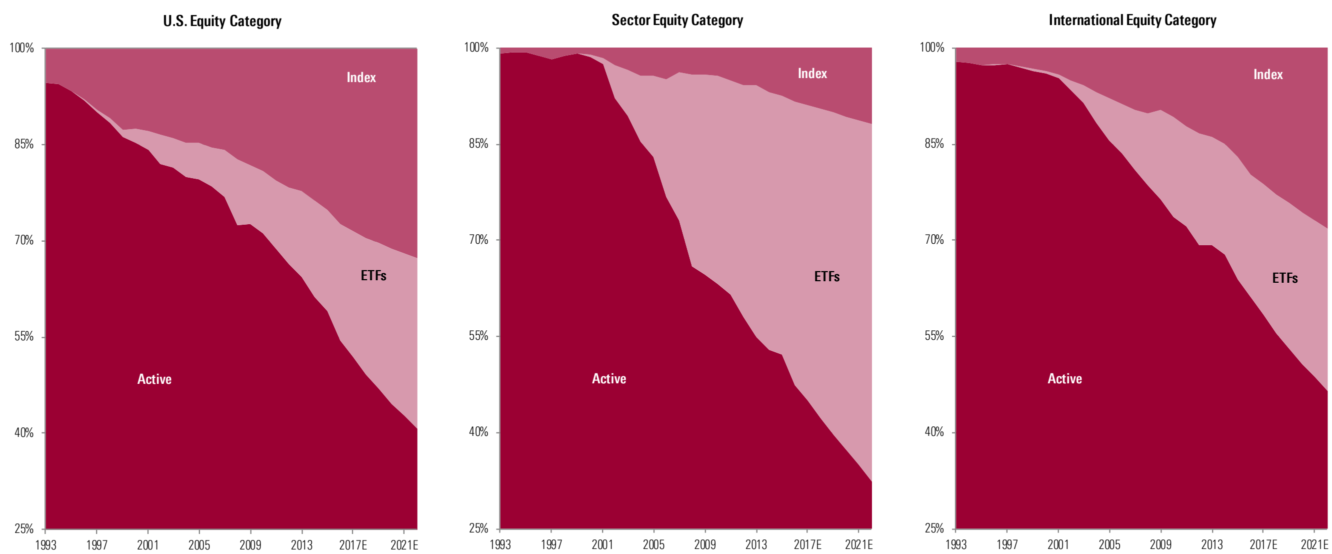
Exhibit 18 Annual Organic Growth Rates for Select Morningstar U.S. Categories by Product Type (2012–16)

	2012	2013	2014	2015	2016	Average Annual Rate	5-Year CAGR
U.S. Equity (Active)	-5.4%	-0.2%	-2.6%	-4.7%	-7.5%	-4.1%	-4.1%
U.S. Equity (Index)	3.1%	7.0%	5.9%	4.1%	6.3%	5.3%	5.3%
U.S. Equity (ETFs)	14.3%	20.5%	13.1%	5.3%	15.1%	13.7%	13.6%
International Equity (Active)	-1.5%	8.2%	3.0%	1.7%	-4.2%	1.4%	1.4%
International Equity (Index)	14.7%	16.8%	15.9%	25.5%	13.8%	17.3%	17.3%
International Equity (ETFs)	21.4%	19.1%	11.5%	25.1%	3.1%	16.0%	15.8%
Allocation (Active)	2.6%	6.5%	4.1%	-2.4%	-4.8%	1.2%	1.1%
Allocation (Index)	14.3%	7.8%	8.1%	5.3%	-0.8%	6.9%	6.8%
Allocation (ETFs)	50.2%	89.6%	41.6%	-1.8%	11.2%	38.2%	34.5%
Taxable Bond (Active)	12.7%	-1.2%	-0.8%	-3.7%	1.9%	1.8%	1.6%
Taxable Bond (Index)	13.7%	11.4%	16.9%	11.2%	15.8%	13.8%	13.8%
Taxable Bond (ETFs)	29.1%	3.3%	21.2%	19.7%	25.4%	19.7%	19.4%

Source: Morningstar data and estimates; company filings

The loss of confidence in active U.S. equity managers has benefitted the providers of both index funds and ETFs that track U.S. equity indexes, further propelling the ongoing secular trend toward passive investing. We've also seen the emergence of investment strategies that blur the lines between active and passive management, with the rapid growth of ETF managed portfolios and strategic beta products highlighting a demand for hybrid investment vehicles that meet different investor needs.

Exhibit 19 Active/Passive Breakdown of U.S. Open-End Equity Funds & ETFs by Category based on Total AUM (1993–2022E)

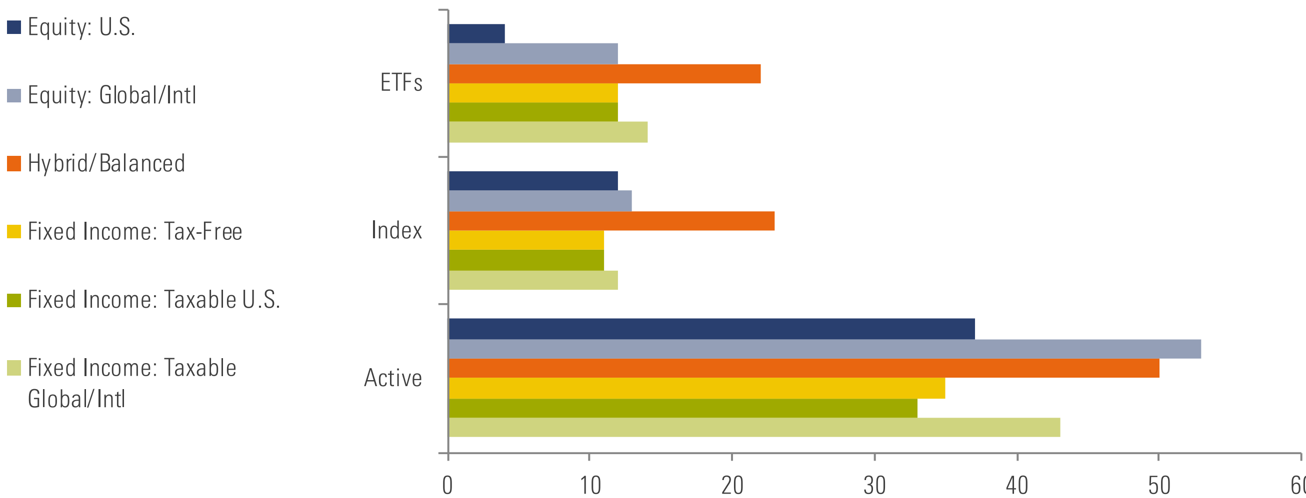


Source: Morningstar Direct- U.S. Open-End & ETF (excluding Money Market and Fund of Funds) Historical Data

Evidence of this can be seen in the breakdown of active and passive funds by the three different equity categories—U.S. Equity, Sector Equity, and International Equity—that Morningstar tracks. Sector-based ETFs, which accounted for 44% of the Sector Equity category at the end of 2016, have had the greatest penetration relative to active funds (47%) and index funds (8%) in the same category. By comparison, just 18% of the U.S. Equity fund category is represented by ETFs, with actively managed and index funds holding sway over 55% and 27% of the category, respectively. Actively managed funds also hold the lion's share of capital invested in International Equity funds, accounting for 61% of the category, compared with 19% and 20%, respectively, for ETFs and index funds.

That said, the trajectory for active equity management share continues to be downward, and actually accelerated last year (likely aided by some of the early culling we've seen by some broker-dealer and advisory networks of their fund platforms). As we look forward over the next five years, we envision the share of actively managed U.S. equity funds dropping down closer to 40%, the share of sector funds managed by active managers falling down closer to 30%, and the share held by active international equity managers dropping down below 50% of the category. While much of the shift to passive products has been driven by the lack of investment performance, a fair amount of it has been spurred on by the widening gap between the management fees being charges for actively managed funds and those that are attached to index funds and ETFs. The end cost to investors also ends up being higher with actively managed funds, once distribution, transfer agency, and other operating costs are included in the overall expense ratio, widening the spread even further.

Exhibit 20 Weighted-Average Active Fund Fees Stack Up Unfavorably Against Index Funds and ETFs

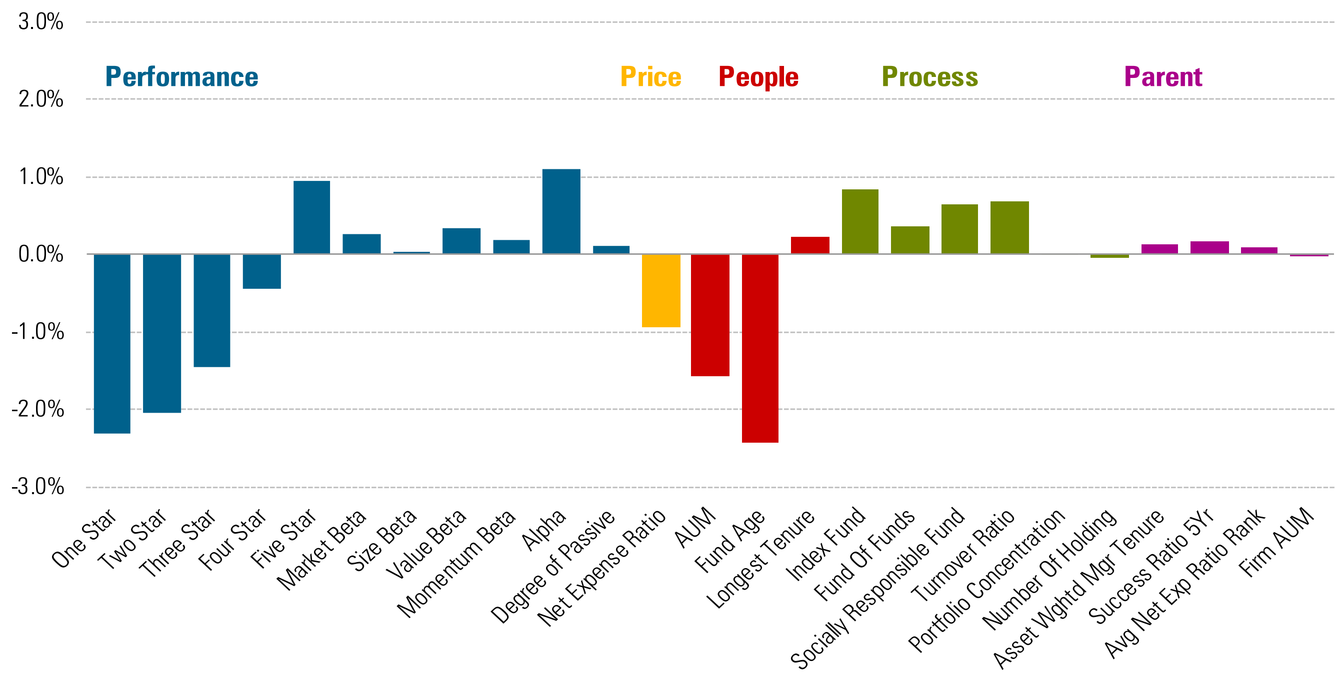


Source: Franklin Resources, Morningstar estimates

A recent research report from Morningstar's quantitative and markets research groups—titled "What Factors Drive Investment Flows?"—attempted to identify the key factors that drive investor fund selection within the different U.S. and global categories. Among the key findings of their research, which involved looking at more than 70,000 funds globally between mid-2003 and the end of 2014, included: (1) U.S. investors strongly preferred low-cost funds (and this is just among open-end funds as the researchers did not include ETFs in their study); (2) Indexed equity funds received higher flows at the expense of active equity funds (whereas active strategies are favored for fixed-income and balanced funds); (3) U.S. investors showed a strong preference for funds with favorable Morningstar ratings; and, (4) Investors overall tend to seek out funds from higher-quality firms.

Looking more closely at the factors that drove flows for U.S.-domiciled equity funds during the mid-2003 to 2014 period), the performance variables stood out for the impact they have on fund flows. Having a 5-star Morningstar Rating provides a fund with nearly 1% higher flows per month, while being rated 1-star correlates more highly with negative 2.3% flows each month. The researchers also noted that investors had a slight preference for funds that tilt toward value, momentum, and market exposure. Price was also a greater determinant of flows, with net expense ratios above the average tending to see weaker flows over time than those with lower fees. While AUM and fund age skews negative, part of this is due to the researchers looking at organic AUM growth (which is equal to period flows divided by beginning of period AUM), and a fund with only $50 million in assets can generally grow much faster in percentage terms than a fund with $1 billion in assets. Helping to counteract this bias for new funds is a slightly positive relationship for funds with long-tenured managers. There was also a strong preference for index funds, which makes sense given the acceleration in index fund growth that started in 2003, and was even more pronounced in the post-financial crisis market.

Exhibit 21 U.S.-Domiciled Equity Fund Flow Factor Attribution (Mid-2003–14)



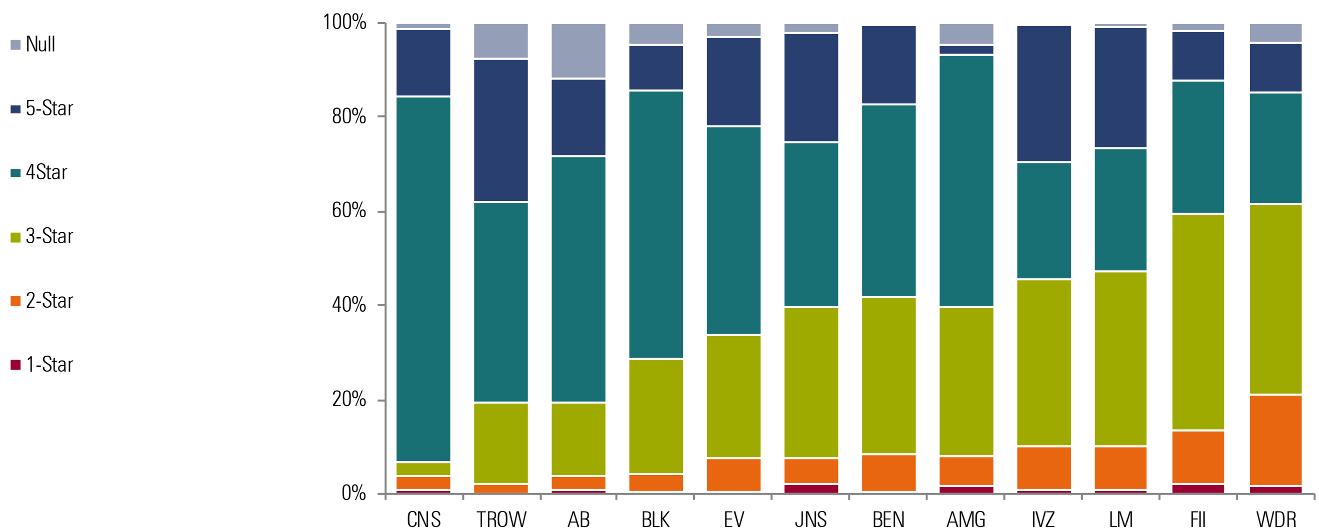
Source: Morningstar Global Quantitative and Markets Research

Looking more closely at the U.S.-based asset managers we cover, it is evident that some are better positioned than others when it comes to the percentage of open-end funds they have with 5-star ratings. By this measure, Invesco, T. Rowe Price, and Legg Mason stand out for having more than a quarter of their funds rated 5-star at the end of 2016. With most broker-dealer and advisory platforms giving deferential treatment to both 4- and 5-star funds, those with percentages of their mutual fund AUM with those two ratings at levels that are at least twice as high as the industry average of 33% include BlackRock, T. Rowe Price, AllianceBernstein, and Cohen & Steers.

These ratings need to be taken with a grain of salt, though, as they only represent the open-end funds that Morningstar actively tracks. For firms like T. Rowe Price, where we track 65% of the firm's total AUM, Federated Investors (69%) and Waddell & Reed (79%), there is a greater degree of certainty, at least on our part, that the ratings we are seeing today are reflective of the results we're likely to see from these firms overall going forward. For firms like BlackRock, where we track less than 10% of the company's total AUM (and less than 40% of its actively managed AUM), the data is far less useful for determining where firm-level flows are likely to go in the near term. The same holds for AB (15% of total

AUM), Legg Mason (20%), Invesco (26%) and Cohen & Steers (35%). In most of these cases, these firms have a much larger institutional channel concentration that other asset managers in our coverage.

Exhibit 22 Percentage of Open-End AUM by Morningstar Rating for Current Coverage List



Source: Morningstar Direct

As we noted earlier, broker-dealer and advisory networks will make room on their platforms for active asset managers that have greater scale, established brands, solid long-term performance, reasonable fees, and which appear to be safer from a regulatory and legal standpoint. A unique overlay for the Morningstar Rating, in our view, is the Morningstar Success Ratio, which evaluates whether a firm's open-end funds have delivered sustainable, peer-beating returns over longer periods, which would fit more closely with what compliance-driven third-party platforms will be looking for in the future.

To determine whether a firm's funds have performed well and delivered for fund shareholders, Morningstar calculates two different success ratios—the Morningstar Success Ratio and the Morningstar Risk-Adjusted Success Ratio—over three-, five-, and 10-year time frames. The denominator for these measures includes all share classes a firm had under management at the beginning of the measurement period, while the numerator includes any share class that survived and performed in the top half of its category. The Morningstar Success Ratio considers funds' category rank based on total return, while the Risk-Adjusted Success Ratio looks at funds' category rank based on Morningstar Risk-Adjusted Return. The higher the Success Ratio, the greater chance that investors will see sustainable, peer-beating returns over the long run. By this measure, T. Rowe Price is the only winner among the asset managers we cover, which is one of the reasons for recommending the name for long-term investors that want greater exposure to active management in a world that continues to go passive.

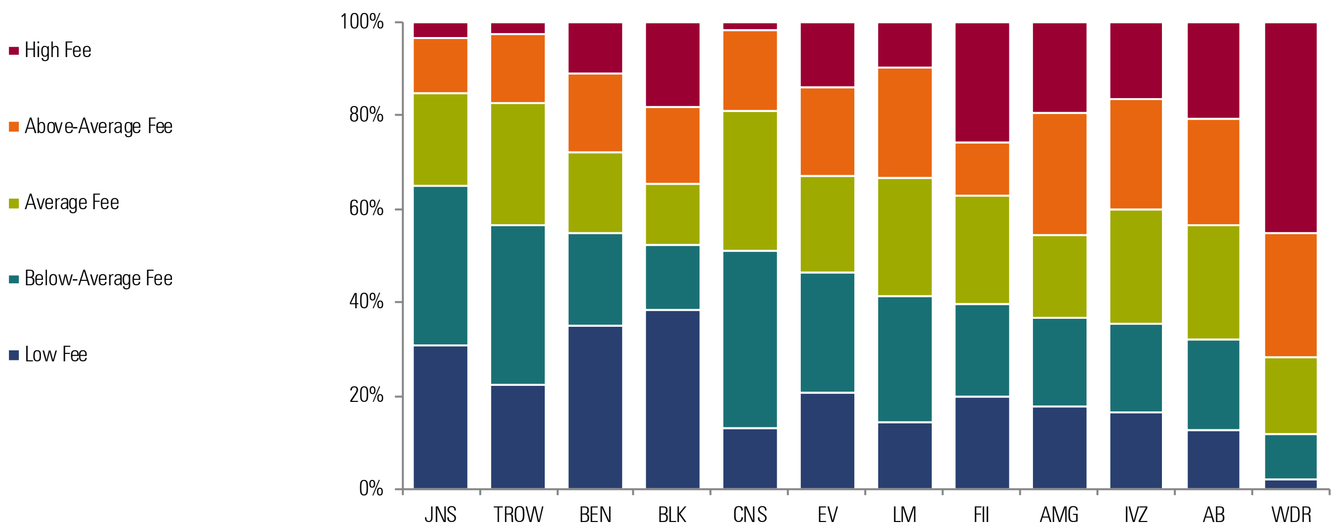
Exhibit 23 Firm Success Ratio and Risk-Adjusted Firm Success Ratio for Morningstar U.S.-Based Asset Manager Coverage

	3-Year	3-Year Risk Adjusted	5-Year	5-Year Risk Adjusted	10-Year	10-Year Risk Adjusted
T. Rowe Price Group	80.0	72.0	78.0	76.0	86.0	76.0
Janus Capital Group	48.0	47.0	38.0	41.0	29.0	27.0
Affiliated Managers Group	46.9	50.1	52.7	55.1	40.6	40.6
Cohen & Steers	39.0	39.0	43.0	40.0	23.0	23.0
Eaton Vance	38.0	38.0	32.0	34.0	13.0	16.0
BlackRock	34.0	33.0	31.0	30.0	22.0	20.0
AllianceBernstein	33.0	33.0	23.0	23.0	16.0	15.0
Invesco	31.0	31.0	23.0	23.0	17.0	19.0
Franklin Resources	27.0	28.0	25.0	25.0	28.0	30.0
Federated Investors	26.0	23.0	29.0	27.0	15.0	15.0
Legg Mason	25.0	25.0	27.0	26.0	15.0	15.0
Waddell & Reed Financial	22.3	22.3	24.3	24.5	35.7	38.8

Source: Morningstar Direct

But performance alone will not guarantee placement on platforms, especially if a firm's fees are well above average. In this regard, T. Rowe Price holds up well, with 56% of its fund share classes in low fee or below-average fee distribution arrangements.

Exhibit 24 Percentage of Open-End AUM by Fee Category for Morningstar U.S.-Based Asset Manager Coverage



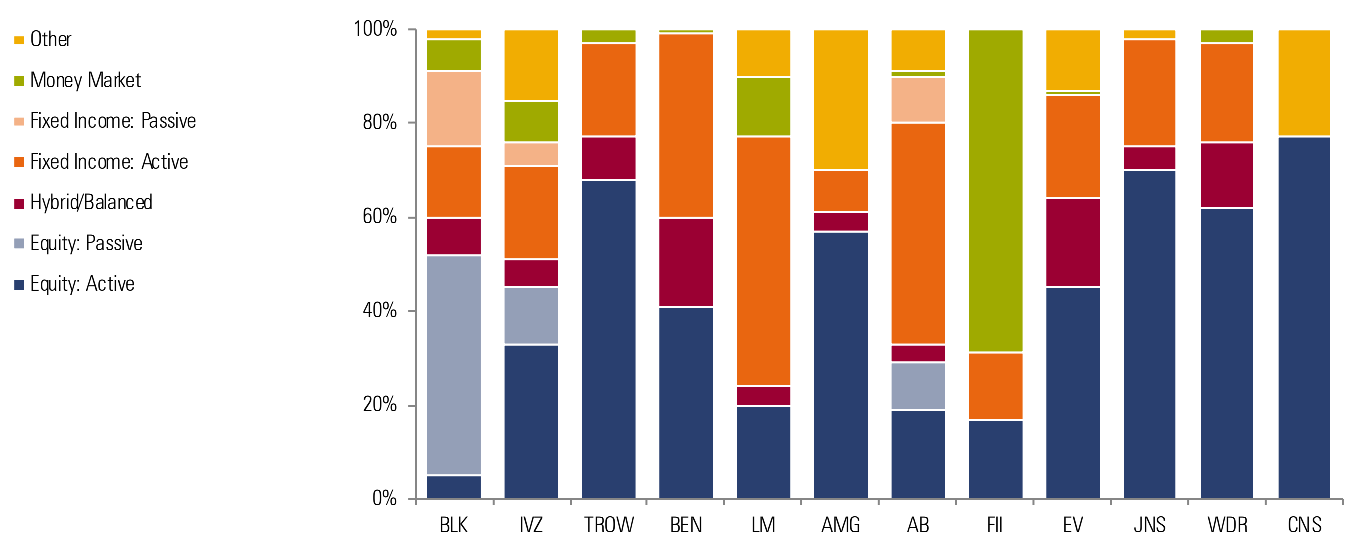
Source: Morningstar Direct

Only Janus Capital Group rates better, with 63% of its fund share classes in low fee or below-average fee distribution arrangements, but much of this could be tied to that firm's decision to move a meaningful portion of its third-party distributed AUM to performance-based advisory fees structures, which has left it with lower base management fees (with performance fee income based on three-year rolling returns for funds carrying performance fee structures). That said, performance fee income has been in negative territory the past six calendar years, and are unlikely to go positive for at least another couple of years, so the lower fee structures that the firm accepted to get placement on these platforms has been driving the bulk of its revenue.

On a separate note, we believe that Janus' performance fee structure for some of its retail mutual funds could serve as a blueprint for active equity managers looking to get their fees down close enough to index funds and ETFs, while still providing the potential for higher fees overall in periods when these funds are outperforming their benchmarks or their peers. Reports out this week hint that AllianceBernstein is looking at a structure for funds considered to be core holdings for investors—basically large-cap equity and taxable bond funds—that would have annual minimum fees (potentially as low as 5 basis points) that could reach much higher levels based on how well they performed relative to their stated benchmark. While a bit more drastic on the surface than what Janus has done with its structure, it could prove useful for a firm like AB that has struggled to generate consistently solid performance with its growth and value equity franchises.

All of this creates huge headwinds for active U.S. equity fund managers, which is the main reason why we've been far more cautious on firms that have a large majority of their AUM dedicated to U.S. equities. With several of the largest index-based ETFs tracking U.S. equities charging less than 5 basis points, active managers are at a big disadvantage, with management fees averaging around 37 basis points, and investors also being saddled with other expenses—including distribution, transfer agency, and other operating costs—even if they're buying fund share classes that don't pay commissions.

Exhibit 25 Asset Class Exposure by AUM for Morningstar U.S.-Based Asset Manager Coverage (Largest to Smallest by Total AUM)



Source: Morningstar data and estimates, company filings

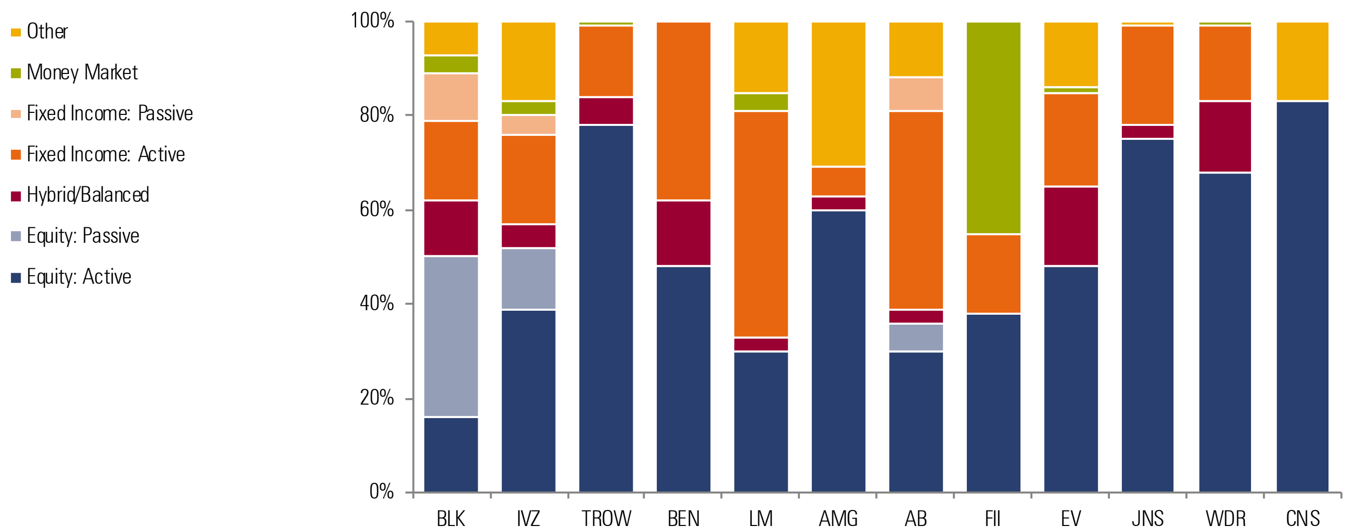
Waddell & Reed's troubles the past several years highlight the risk of not only being equity-fund heavy but relying too much on a single fund to drive a majority of sales and AUM growth. As recently as three years ago, Ivy Asset Strategy accounted for more than a quarter of Waddell & Reed's AUM and flows, and more than 30% of its fees. While the fund was touted as a go anywhere fund capable of delivering equity-market-like returns with less than equity-market risk, and posted an impressive track record relative to its category and benchmark, the rollout of similar funds by other providers at fee rates lower than Ivy Asset Strategy's expense ratio, and a dramatic downturn in investment performance, started an avalanche of outflows that reduced the size of the fund from $34.6 billion at the end of 2013 to $5.0 billion at the end of 2016. As such, it was no surprise to see one of the firm's third-party distributors remove the struggling Ivy Asset Strategy fund from their platform in the second quarter of 2016, as we've seen this scenario play out for other companies in the past—highlighting the importance, in our view, of not relying on a single fund or style to generate a meaningful portion AUM and flows.

That said, being broadly diversified is not always a guarantee of success, as both Legg Mason and AllianceBernstein were laid bare during the financial crisis by poor performance in one of their core segments, and more recently Franklin Resources has struggled with meaningful outflows from its global/international fixed-income segment as the performance of its Templeton Global Bond and Templeton Global Total Return funds have faltered. As Franklin has also had a history of generating the majority of its sales in any given period from a handful of funds, it like Waddell & Reed has also faced the risk that underperformance from any one of these funds affects flows (both to the positive and the negative). Both firms are also more exposed to the distribution disruption that has been sparked by the Department of Labor fiduciary rule, with Franklin Resources maintaining tight relationships with several advisory networks (which had been viewed as a positive attribute in the past). With Waddell & Reed garnering more than half of its AUM from its own captive brokerage arm, which primarily sells its own proprietary funds, the firm faces the greatest headwinds among the U.S.-based asset managers.

We also expect the more broadly diversified asset managers, especially those with large retail fixed-income platforms, to face additional headwinds in the near-to-medium term as rising interest rates generate market losses on bonds and amplify retail fund redemptions. While the organic CAGR for actively managed fund AUM was negative 0.3% and 0.8%, respectively, during the past 5- and 10-year periods, we think either rate of annual growth would be ambitious going forward. Flows into fixed-income funds drove most of the industry's organic growth during the past decade, and with equity flows in negative territory anything that changes that equation (like a series of interest rate increases) would be detrimental to flows. Firms that cater more heavily to institutional investors with their fixed-income platforms—BlackRock and Legg Mason (which along with PIMCO form an effective oligopoly in the institutional channel for fixed-income products)—are less likely to be impacted by outflows as most institutional clients moved their exposure several years ago to accommodate a rising interest rate environment. That said, at some point some of these clients—pension plans and insurers—will need to increase the durations of their assets as many are not properly duration matched today. As for the firms that have slightly higher retail exposure in bond funds the hope is that they can offset some of the negative bond fund outflows with inflows into equity- and alternative-based products.

Given this environment, we continue to recommend that long-term investors focus on BlackRock, the leading provider of ETFs, which also garners more than 80% of its AUM from institutional clients, and T. Rowe Price, which has the best and most consistent active investment performance and derives two thirds of its AUM from retirement-based products. The two firms are not only better positioned competitively, but have more room to give up margin to generate growth, with BlackRock and T. Rowe Price both closing out 2016 with operating margins of 41%, compared with the group averaging around 28%. As we noted above, BlackRock is probably the best positioned for the distribution disruption the Department of Labor fiduciary rule has sparked. The firm has held its share of the U.S. ETF market steady at 38%–39% the past four calendar years, despite facing intense pricing competition in its core index-based product set. BlackRock/iShares has also generated the largest absolute flows among the major U.S. providers of ETFs for three years running.

Exhibit 26 Asset Class Revenue Contribution for Morningstar U.S.-Based Asset Manager Coverage (Largest to Smallest by Total AUM)



Source: Morningstar data and estimates, company filings

With some of the largest and cheapest ETF products on the market, we see that trend continuing in an environment where costs are expected to be a driving factor behind product selection. That said, we do expect Vanguard, which is BlackRock/iShares' largest rival in the U.S. ETF market, to be far more dominant on the retail side of the business, given that the market has become bifurcated, with BlackRock/iShares maintaining a strong dominant position in the institutional channel and Vanguard taking the lead with retail ETF sales. At this point, BlackRock/iShares is growing in line with the industry, which produced an organic CAGR of 14.1% during 2012–16, and we expect that to continue in the near-to-medium term, projecting average annual organic growth in the 10%–14% range. This should be good enough to generate an organic CAGR for AUM of 3.8% during 2017–21, head and shoulders above most everyone else in the group, with revenue expanding at a 6.1% CAGR over the next five years, even with the ongoing fee pressure we expect to see in the industry.

As for T. Rowe Price, the firm has produced impressive growth in AUM and revenue during the past decade thanks to its strong brand, solid fund performance, and mostly favorable market conditions. Although its record of strong organic growth has been challenged of late, with the company reporting only its second period of negative organic growth during the past 10 years during 2016, it has done much better than peers with similarly equity-heavy lineups. Total outflows of $3.4 billion last year were driven primarily by outflows from equity/balanced mutual fund products, with the $9.9 billion that flowed out of these funds reflective of a negative 2.6% rate of organic growth. This was better than the industry overall, which posted a blended organic growth rate of negative 6.8% during 2016, driven by a record $264 billion in outflows from active U.S. equity funds. With 84%, 80%, and 86% of T. Rowe Price's mutual funds beating their peers on a three-, five-, and 10-year basis, respectively, at the end of 2016, we expect the firm to continue generating better organic growth than the industry.

Exhibit 27 Annual Organic Growth Rates on Long-Term AUM for Morningstar U.S.-Based Asset Manager Coverage (2012–16)

	2012	2013	2014	2015	2016	5-Year CAGR	Average Rate 5-YR Forward
BlackRock	-0.1%	3.4%	4.5%	3.5%	4.2%	3.1%	3.8%
Invesco	2.1%	4.2%	-0.3%	2.0%	1.4%	1.9%	2.7%
T. Rowe Price Group	3.5%	-2.1%	0.5%	0.3%	-0.4%	0.3%	1.1%
Franklin Resources	-0.6%	2.6%	-1.1%	-6.0%	-11.8%	-3.5%	-7.1%
Legg Mason	-4.5%	-1.7%	1.2%	-0.8%	-3.7%	-1.9%	1.1%
Affiliated Managers Group	9.2%	9.4%	4.0%	-0.5%	1.2%	4.6%	2.7%
AllianceBernstein	-3.5%	-2.9%	1.1%	0.7%	-2.3%	-1.4%	0.7%
Federated Investors	7.9%	-2.0%	5.6%	1.5%	3.8%	3.3%	1.7%
Eaton Vance	0.1%	12.3%	1.0%	5.6%	6.2%	5.0%	3.2%
Janus Capital Group	-8.1%	-12.6%	-2.8%	-1.4%	-1.6%	-5.4%	-0.1%
Waddell & Reed Financial	1.3%	8.8%	-2.8%	-11.1%	-24.2%	-6.3%	-7.5%
Cohen & Steers	-6.3%	-4.3%	-4.1%	-1.8%	12.7%	-1.0%	4.3%

Source: Morningstar data and estimates, company filings. Excludes the impact of money market fund flows.

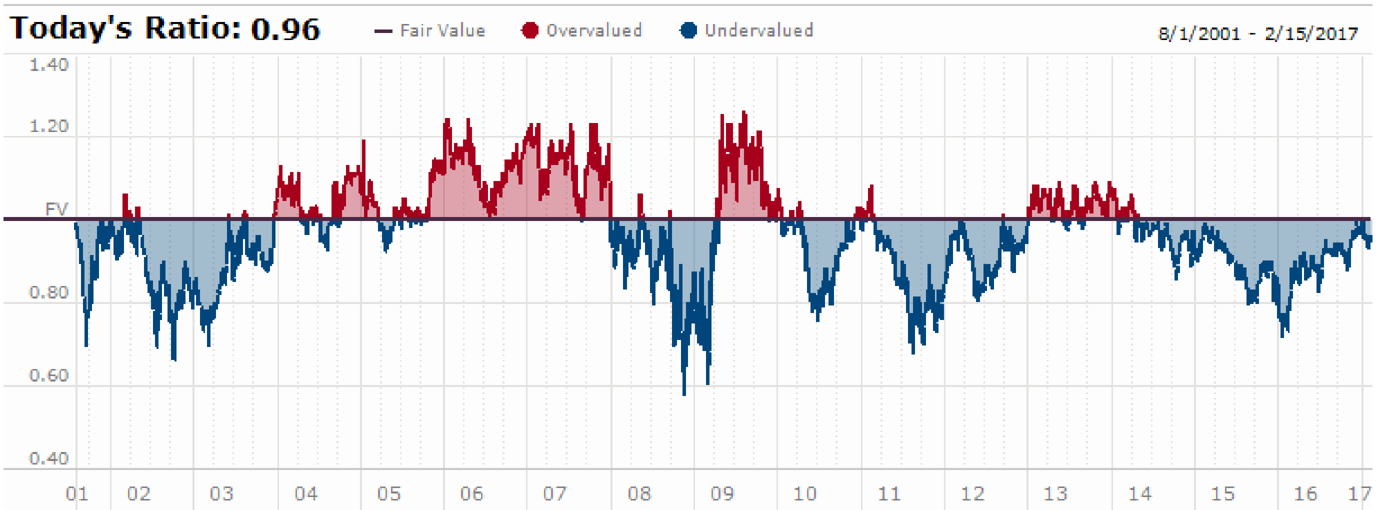
One of the key strengths historically for T. Rowe Price has been its disciplined, risk-conscious investment process, which has consistently produced successful long-term results across its fund lineup, often with less volatility than peers. The firm has historically had a far greater percentage of its mutual fund AUM with an overall Morningstar Rating of 4- or 5-stars than its peers, and its fund lineup has tended to be reasonably priced in the aggregate. The firm's average fee-level percentile rank at the end of last year was 39, which signifies to us that its management fees are competitive but not necessarily industry-leading. That said, the company's collection of direct-sold share classes, which house the bulk of its mutual fund assets, are priced more attractively than their advisor share classes (which look average to pricey when compared with similar funds), so some price renegotiation will likely be required as the firm looks to expand its presence on broker-dealer and advisor platforms. That said, we don't envision the cuts being nearly as heavy as we are anticipating for the rest of the industry—where 5%–10% annual reductions in management fee rates in each of the next several years are likely to be the norm for run of the mill active asset managers as broker-dealers and advisors repopulate their platforms with solid performing active funds that charge reasonable fees.

While T. Rowe Price is expected to face headwinds on the 401(k) side of the business, as the baby boomer rollover phenomenon will leave the firm scrambling to convince plan participants to keep their assets in place, we believe that T. Rowe Price is uniquely positioned to pick up business in the broker-dealer and advisory channels, given the solid long-term performance of its funds. The top goals for the firm in the near-to-medium term are: (1) to work to hold on to as much of the baby boomer capital it can in 401(k) plans by offering solid post-retirement products and services, as well as convincing those considering rollovers that it is far more cost effective to remain in the 401(k) plan, which benefits from group buying power, as opposed to rolling their assets into costlier retail-advised accounts; and, (2) attempt to capture some of the capital that will be rolled over into IRAs from 401(k) plans, regardless of whether the firm is plan administrator or not, by heavily marketing its solidly performing actively managed fund offerings, as well as its target-date funds, to broker-dealer and advisory networks (which should be facilitated by a doubling of the sales force that T. Rowe Price has covering the broker-dealers, as well as a beefing up of its own internal staff dedicated to the advisory channel).

As we noted previously, we expect active asset managers that have greater scale, established brands, solid long-term performance, reasonable fees, and which are perceived to be safer from a regulatory and legal standpoint, to have a leg up over their peers in an environment that has been influenced by the Department of Labor fiduciary rule. With $811 billion in AUM at the end of 2016, spread among equity and blended (77%) and bond and money market (23%) funds, T. Rowe Price has the size and scale necessary to be competitive with peers looking for placement on broker-dealer and advisor platforms. The company has been a symbol of stability in the asset management group, with a brand and reputation that has been built on its disciplined, risk-conscious investment process, which has consistently produced successful results across its fund lineup, often with less volatility than peers. While T. Rowe Price's management fees are not necessarily the lowest in the industry, the firm should have a far easier time meeting the enhanced compliance standards of broker-dealers and advisors in a post-Department of Labor fiduciary rule world. It is one of the few long-term winners that we can identify on the active side of the business, despite the headwinds posed by potential rollovers from baby boomer 401(k) accounts to IRAs over the next decade.

As both BlackRock and T. Rowe Price have traditionally traded at premiums to the group, though, finding good entry points can be difficult. The best time to buy the U.S.-based asset managers tends to be during market downturns, as the asset managers will generally trade down harder than the market, with their price to earnings multiples looking far more attractive on a relative historical basis. These periods have tended to be the better times to build stakes in BlackRock and T. Rowe Price. We would also note that during these periods of market dislocation investors have had success finding greater value in some of the second-tier names in the group—like Eaton Vance, Invesco, and Affiliated Managers Group—that are on pace to generate above-average rates of organic growth, but don't quite have the same level of competitive positioning we see with BlackRock and T. Rowe Price. Two such opportunities presented themselves during the past year, leading us to put Invesco on the Best Ideas list back at the beginning of July 2016, and AMG on the same list at the beginning of January 2017, both of which have generated sloid near-term gains for investors in relatively short order.

Exhibit 28 Morningstar Market Fair Value Chart for U.S.-Based Asset Managers



Source: Morningstar data and estimates, company filings

When we placed Invesco on the Best Ideas list at the start of the third quarter of 2016, the firm was trading at less than 9 times forward earnings, compared with the group at more than 13 times, after the firm sold off in the aftermath of the Brexit vote near the end of June 2016. At that time, we noted that the market was acting like the firm was going to lose all the AUM it had in the United Kingdom—with Invesco garnering 13% of its managed assets from the U.K., another 10% from Continental Europe, and just over 30% of its revenue from the two regions—which we felt was highly unlikely. While we acknowledged that there would surely be market losses, redemptions, and currency losses as a result of the Brexit vote, we did not see them rising to the level that the market was insinuating in the price of the company's common stock. On top of that, the company had effectively hedged its currency risk relative to the British pound long before the Brexit vote took place, taking some of the sting out of the impact that adverse currency exchange would have on the company's AUM, revenue and profitability.

The only other stocks in our U.S.-based asset manager coverage that were trading at similar multiples at the end of June 2016 were Legg Mason, Waddell & Reed and AMG. Of those three names, AMG (which also lost around 25% of its value in the days following the Brexit vote) was the only other one name we considered recommending to investors, as Legg Mason had increased its risk profile earlier in 2016 (having taken on an additional $1.5 billion in debt to finance several acquisitions) and Waddell & Reed continued to struggle with poor performance, manager turnover and outflows. The main reason we preferred Invesco over AMG was that we felt we had much more clarity into Invesco's AUM levels, as the company reports AUM levels monthly, providing us with a better sense of how things were panning out between quarterly reports. Invesco also had much more capacity to buy back shares, as AMG had committed itself to $400 million in investments in new boutique managers in early June 2016, which would impact its ability to buy back shares in the near term. Invesco also paid a dividend (yielding 4.1%

at the time), while AMG did not, electing to retain its earnings to finance investments in new affiliates, develop existing businesses, repay indebtedness, and/or repurchase shares.

While that recommendation worked out well, with Invesco increasing in value around 25% (and more than 27% on a total return basis) since the beginning of July, more than double the return for both the group and the S&P 500 TR Index, we did get a chance to add AMG to the Best Ideas list at the beginning of 2017, as the firm had barely moved off of its lows at the end of June 2016, despite continuing to post positive organic growth in the face of headwinds in its global/international equity and emerging and developing market equity fund platforms. We noted at the time that the shares were among the cheapest in our U.S.-based asset manager coverage despite having a projected future organic growth profile (with an estimated organic CAGR for AUM of 2.7% during 2017–21) that was on par with some of the better flow generators in the group. Although we believed that some discount in the shares was warranted, given the company's greater exposure to emerging and developing equities (9% of AUM), along with other global/international equities (24%), which increased its risk profile slightly in the near term, we thought that the fundamentals of the company's business model remained intact and that the firm's discount to the rest of the group—trading at less than 10 times forward consensus earnings (compared with our U.S. asset manager coverage at more than 13 times)—presented a decent buying opportunity for investors. Since then, the firm has reported fairly solid fourth-quarter results, committed to buying back $200 million worth of stock in the first half of 2017, and initiated a quarterly cash dividend of $0.20 per share (equivalent to around a 0.5% yield)—all of which combined to drive the value of the company's shares around 25% high since the start of the year.

A Need to Increase Scale in the Face of Fee and Margin Compression Will Drive Consolidation

As the active U.S.-based asset managers adjust to the new world order, where fees are being pressured as managers are forced to justify the spread between their product offerings and index funds and ETFs that offer market exposure at a significantly lower cost, and participants have to spend more heavily to not only to produce better investment results but stay relevant on third-party platforms, industry consolidation will be inevitable. Going forward, we expect to see a fair amount of consolidation—both internally (as fund companies consolidate funds to increase scale and eliminate underperforming offerings) and externally (as medium- to large-sized managers look to increase scale and product breadth)—with most of the activity concentrated on the U.S. equity side of the business, which is the most exposed to the growth of passive, and where the fee and performance discrepancy is the greatest.

We expect the majority of the firms in our coverage to consolidate internally where it makes sense, increasing the scale of individual funds under the direction of solid active managers that are more likely to provide them with the best chance to keep fee cuts to a minimum while still gaining access third-party platforms. This can be a double-edged sword, though, as fund tend to underperform the larger they get in size, so managing that differential will be critical to long-term success. As for external consolidation, we view most of our U.S.-based asset manager coverage as being buyers rather than sellers. Unlike past rounds of consolidation, though, which involved buying up managers to either fill in product sets or expand distribution reach, we expect future deals to be done more for scale than anything else. In these type of deals, we envision mid-tier asset managers (those with $250 billion–$750 billion in AUM) acquiring small- to mid-sized firms (those with $25 billion–$250 billion in AUM), understanding the they are likely to lose upward of 40% of the assets as they consolidate the acquired company's funds into their own, as long as the deals are priced on those assumptions. While there are plenty of firms out there that fall well below the threshold of a small-sized firm, we don't expect to see much buying activity of these types of firms for scale. If anything, we could see deals of that size done to fill product holes or as product enhancement moves.

We'd also expect firms of that size with aging partners to start looking to sell equity stakes to larger firms, which is more in Affiliated Managers Group's wheel house than anyone else's. We think that the firm's proficiency at investing in and maintaining relationships with well-respected boutique asset managers over the years has provided AMG with at least one unique competitive advantage. Having initiated its strategy of buying equity stakes in boutique asset managers in the early 1990s, AMG has been working with and adjusting its business model for more than 20 years. In that time, the firm has built out a target investment universe that includes more than 1,500 investment management firms globally, including a select grouping of 150 core prospects, creating a pipeline of potential investments where AMG is generally viewed as the "buyer of choice" by the owners of these boutique asset managers. At this point, we believe it would be difficult for another firm to replicate much of what AMG has created with its business model. Those that have tried over the years have struggled to generate the level of success that AMG has had with its own strategy. We think this further cements the firm's position as the buyer of choice for many boutique asset managers, and would expect them to be fairly active in the industry consolidation we expect to see in the future.

Looking more closely at our two long-term recommendations, we would be highly surprised to see BlackRock, which is already running $5.147 trillion in AUM, and has a strong tailwind coming from the growth of ETFs, to do much on the acquisition front that was not bolt-on in nature. For example, the firm acquired the robo-advisor Future Advisor back in August 2015, which created quite a stir for the broker-dealer and advisor networks, who were concerned that BlackRock was moving into the wealth management market. We were not so convinced, believing that the firm was buying the technology, which it would ultimately offer up to advisor networks for next to nothing, as long as iShares was the preferred ETF product set on those platforms. Granted, we could see BlackRock pursuing a lift-out of a talented team of active equity managers to try to improve its own active equity platform, but they seem to still be on the "fix it rather than buy it" mode of trying to turn around those operations. With the firm generating more than $3.5 billion in free cash flow, and returning more than 70% to shareholders as dividends and share repurchases, BlackRock should still have close to $1 billion of free cash flow available annually as dry powder to use for acquisitions.

As for T. Rowe Price, we don't really see the firm doing much on the acquisition front. Much of the success that the firm has had historically has been built on its having a single corporate culture dedicated to a common purpose, which has been reflected in the level and consistency of its investment performance, the rate of organic growth the company has been able to generate, and the relatively small amount of employee turnover it has seen over the years. The asset management business is inherently a people (and, therefore, a culture) business, and the landscape has been filled with acquisitions and mergers that have not worked out as well as management expected them to going in because of the clash of cultures that occurred following the combination. We see the management team at T. Rowe Price as being highly insular, and as very protective of the culture that the firm has built over the past several decades—one that has cultivated a disciplined, risk-conscious investment process that has consistently produced successful results across its fund lineup, often with less volatility than peers. While that would not necessarily preclude them from doing smaller deals—in particular, bolt-on acquisitions or lift-outs—the circumstances would have to be just right, with any management team they would be brining on board fitting in almost seamlessly with their existing group of managers.

As for potential sellers, prior to the fourth quarter of 2016, we would have highlighted Janus Capital Group as a seller in the long run. That said, the firm got in front of our argument in early October 2016 when it announced that it would be merging with the Henderson Group, a U.K.-based global fund manager. The deal made strategic sense for both firms, as it increased the global scale and distribution outreach of the two companies, which should allow them to offset some of the pricing pressure and higher costs we expect to see in the industry longer term. It is also expected to open up avenues for additional growth as each of the firms takes advantage of the other's distribution reach. Looking further down the AUM scale, Waddell & Reed (with $80.5 billion in total AUM) could be a takeout candidate, but given its performance problems on the fund manufacturing side of the business, and the issues it faces on the advisory side of the business relative to the Department of Labor fiduciary rule, we have a hard time coming up with willing buyers. While the case could be made for a midtier asset manager to buy the business whole, then carve out the advisory business and selling it off to another network, and consolidate the AUM from the fund manufacturing side of the business into its own operations, it would be complicated by the fact that there are a lot of proprietary funds in the accounts of clients in Waddell & Reed's advisory arm that probably wouldn't fare to well in an open-architecture environment.

All of which leaves us with Cohen & Steers, which has carved out a niche for itself as a successful investor in REITs, which accounted for more than two thirds of the company's $57.2 billion in total AUM at the end of 2016. Martin Cohen (the company's executive chairman) and Robert Steers (its CEO) cofounded the firm in 1986 (and took it public in 2004) and continue to collectively own 52% of the company's common stock. With both men getting into their seventies in the next five to ten years, we could see them looking for ways to monetize their stakes in the firm—which could involve selling it outright to one of the mid-tier managers. While most of them do have real estate offerings in one form or another, Cohen & Steers could prove to be a coveted asset, with about a third of its total AUM coming from outside of the United States, and the firm garnering around 50% of its total AUM from institutional relationships, which tend to be far stickier than retail AUM.

Firms with Moats and Domestic Concentration Will Benefit More from Corporate Tax Reform

With the traditional U.S.-based asset managers facing a multi-year period of fee and margin compression, as their primary retail distribution channels—broker-dealers and advisors—are focused more than they ever have been on investment performance and fees (relative to low-cost index funds and ETFs), and are already culling platforms to eliminate poorer-performing and higher-costing actively managed funds, a reduction in the statutory U.S. federal income tax rate can't come soon enough, as it will help to offset the impact of these pressures, ensuring that cash flows don't fall off too precipitously.

When looking at the effects that corporate tax reform could have on the valuations of the U.S.-based asset managers, we have chosen to forego any impact from a potential removal of interest expense deductibility, or from an inclusion of accelerated depreciation (with capital spending being expensed in full the year that it takes place), in our sensitivity analysis. Asset managers tend to be asset light, and while they are not balance sheet-driven like the banks and insurers, they will carry debt from time to time. As such, the deductibility of interest expense could be problematic for firms carrying somewhat higher debt balances. That said, the industry as a whole has meaningfully reduced its reliance on debt financing in the aftermath of the 2008-09 financial crisis, as several firms came perilously close to tripping their debt covenants at the bottom of the global equity market decline. For an industry that already has a meaningful amount of operating leverage, and is tied to the vagaries of the capital markets, there are limits to the amount of debt a firm should be carrying, such that the elimination of interest expense deductibility is unlikely to be so great that it offsets the benefits of a meaningful cut in the statutory U.S. federal income tax rate. As for capital spending, the asset managers spend far less on capital improvements than other industries, so we don't see the ability to immediately deduct capital expenditures as being meaningfully impactful for the industry.

Exhibit 29 Tax Rate Sensitivity Analysis for Morningstar U.S.-Based Asset Manager Coverage

	Moat	% U.S. Income	Current FVE	FVE @ 15% Rate	% Increase	FVE @ 20% Rate	% Increase	FVE @ 25% Rate	% Increase
T. Rowe Price Group	Wide	95.0	77.00	100.00	29.9	95.00	23.4	90.00	16.9
Eaton Vance	Wide	95.0	40.00	52.00	30.0	49.00	22.5	46.00	15.0
Federated Investors	Narrow	97.0	28.00	36.00	28.6	34.00	21.4	32.00	14.3
Cohen & Steers	Narrow	88.0	37.00	46.00	24.3	44.00	18.9	42.00	13.5
Janus Capital Group	Narrow	90.0	14.00	17.10	22.1	16.40	17.1	15.70	12.1
Waddell & Reed Financial	Narrow	95.0	19.00	23.00	21.1	22.00	15.8	21.00	10.5
BlackRock	Wide	70.0	410.00	497.00	21.2	475.00	15.9	453.00	10.5
Affiliated Managers Group	None	70.0	185.00	220.00	18.9	212.00	14.6	204.00	10.3
Invesco	Narrow	55.0	35.00	41.00	17.1	39.50	12.9	38.00	8.6
Franklin Resources	Wide	58.0	37.00	43.00	16.2	41.50	12.2	40.00	8.1
Legg Mason	Narrow	68.0	38.00	43.00	13.2	41.50	9.2	40.00	5.3

Source: Morningstar data and estimates; company filings

Within our coverage of the U.S.-based asset managers, we see a fairly wide band of potential outcomes from corporate tax reform, with firms generating a greater percentage of their pre-tax income domestically tending to benefit more from a reduction in the corporate tax rate. Companies with wide moats, and which generate a larger percentage of their profits in the United States, like T. Rowe Price and Eaton Vance, will see a much larger benefit from corporate tax reform. They are also more likely to hold on to those gains for longer periods of time than some of the narrow moat firms that we expect to see meaningful increases in their valuations from a reduction in the statutory U.S. federal income tax rate, like Federated Investors and Cohen & Steers.

On the lower end of the scale, we see firms that either already pay less in taxes because they do more business overseas, like Invesco or Franklin Resources, or because they have meaningful amounts of deferred tax assets, like Legg Mason (which had $712 million in U.S. federal deferred tax assets at the end of fiscal 2016—the realization of which is expected to require $3.2 billion of future U.S. earnings, of which $740 million must be foreign-sourced earnings), with a lower corporate tax rate requiring a write down of these assets. We would note, however, that this is purely an accounting adjustment, and that Legg Mason's actual cash flow, and therefore our valuation, would not be affected by this impairment. On a separate note, we did not include AllianceBernstein in our sensitivity analysis, since it is structured as a limited partnership and, as such, is taxed at a significantly lower rate than most corporations, while being required to pay out essentially all of its available cash flows as dividends to unitholders.

While a handful of the U.S.-based asset managers—Eaton Vance, T. Rowe Price, BlackRock, Affiliated Managers Group, and Franklin Resources—would benefit from a tax repatriation holiday, allowing them to bring back excess cash that has been trapped overseas by the large differential between the statutory U.S. federal income tax rate and the rates in the markets where they operate overseas, Franklin Resources would be the biggest beneficiary of a one-off tax holiday. At the end of fiscal 2016, Franklin Resources had $8.3 billion in cash and another $2.4 billion in investments on its books. About two thirds of the cash and investments was held overseas (with half of that required to meet regulatory capital requirements in various countries, as well as for seed capital for new funds or dry powder to fund potential acquisitions), which precluded it from being used for share repurchases, dividends or investments in its U.S. operations—unless the firm were to repatriate it (taking a tax hit in the process). A tax repatriation holiday would, by our estimates, allow Franklin Resources to bring $3 billion–$4 billion back to the United States at a meaningfully lower tax rate, with the proceeds going toward a special dividend and/or share repurchases—that is, to the extent any legislation allows the repatriated capital to be used for those purposes.

Appendix

BlackRock (BLK) ★★★

Last Price	Fair Value	Uncertainty	Stewardship	Economic Moat	Moat Trend	Morningstar Credit Rating
384.98 USD	410 USD	Medium	Exemplary	Wide	Positive	N/A

Analyst	Gregg Warren, CFA
Phone & Email	312-384-4015
greggory.warren@morningstar.com	
Sector	Financial Services
Industry	Asset Management

Five-Star Price	287.00
Fair Value Estimate	410.00
One-Star Price	553.50
Market Price	384.98
P / FVE	0.94

Estimated COE	9.0%
Pre-Tax Cost of Debt	5.5%
Estimated WACC	8.7%
ROIC *	12.7%
Adjusted ROIC *	21.5%

* 5-Yr Projected Average

Adjusted P / E	18.2	19.4
EV / Adjusted EBITDA	11.4	12.2
EV / Sales	5.1	5.4
Price / Book	2.1	2.3
FCF Yield	5.9%	5.6%
Dividend Yield	2.6%	2.4%
(2017 Estimates)	(Price)	(Fair Value)

All values (except per share amounts) in: USD Millions	3-Yr Historical CAGR/AV	2016	Forecast 2017	2018	2019	2020	2021	5-Yr Projected CAGR/AVG
Income Statement								
Revenue		11,155	11,812	12,670	13,373	14,174	14,975	
Gross Profit		11,155	11,812	12,670	13,373	14,174	14,975	
Operating Income		4,646	5,006	5,448	5,811	6,220	6,630	
Net Income		3,172	3,457	3,812	4,090	4,391	4,651	
Adjusted Income		3,226	3,457	3,812	4,090	4,391	4,651	
Adjusted EPS		19.37	21.12	23.68	25.83	28.21	30.40	
Adjusted EBITDA		4,865	5,235	5,687	6,055	6,469	6,886	
Growth (% YoY)								
Revenue	3.1%	-2.2%	5.9%	7.3%	5.5%	6.0%	5.7%	6.1%
Gross Profit	3.1%	-2.2%	5.9%	7.3%	5.5%	6.0%	5.7%	6.1%
Operating Income	6.4%	-0.4%	7.7%	8.8%	6.7%	7.0%	6.6%	7.4%
Net Income	2.7%	-5.2%	9.0%	10.3%	7.3%	7.4%	5.9%	8.0%
Adjusted EPS	4.7%	-2.1%	9.1%	12.1%	9.1%	9.2%	7.8%	9.4%
Adjusted EBITDA	5.5%	-0.9%	7.6%	8.6%	6.5%	6.8%	6.4%	7.2%
Profitability (%)								
Gross Margin	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Operating Margin	41.0%	41.6%	42.4%	43.0%	43.5%	43.9%	44.3%	43.4%
Net Margin	29.2%	28.4%	29.3%	30.1%	30.6%	31.0%	31.1%	30.4%
Adjusted EBITDA Margin	43.2%	43.6%	44.3%	44.9%	45.3%	45.6%	46.0%	45.2%
Return on Equity	11.7%	11.0%	11.8%	12.6%	13.2%	13.8%	14.1%	13.1%
Adjusted ROIC	18.9%	19.0%	20.2%	21.1%	21.5%	22.0%	22.5%	21.5%
Adjusted RONIC	-40.6%	22.6%	85.3%	32.8%	30.7%	33.8%	33.7%	43.3%
Leverage								
Debt / Capital	14.9%	14.6%	14.2%	13.9%	13.6%	13.2%	12.9%	13.5%
Debt / EBITDA	1.0	1.0	0.9	0.9	0.8	0.8	0.7	0.8
EBITDA / Interest Expense	22.6	23.4	25.5	28.0	29.8	31.8	33.9	29.8
FCFE / Total Debt	0.63	0.71	0.76	0.77	0.84	0.90	0.96	0.84
Cash Flow								
Dividends per Share		9.16	10.00	10.90	11.88	12.95	14.12	
Free Cash Flow to the Firm		3,002	3,143	2,901	3,160	3,460	3,734	
FCFE (CFO-Capex)		3,558	3,727	3,795	4,123	4,413	4,711	
Dividend Franking		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Dividend Payout Ratio		48.1%	47.3%	46.0%	46.0%	45.9%	46.4%	

T. Rowe Price Group (TROW) ★★★

Last Price	Fair Value	Uncertainty	Stewardship	Economic Moat	Moat Trend	Morningstar Credit Rating
69.86 USD	77 USD	Medium	Exemplary	Wide	Stable	N/A

Analyst	Gregg Warren, CFA	Five-Star Price	53.90	Estimated COE	9.0%	Adjusted P / E	14.5	16.0
Phone & Email	312-384-4015	Fair Value Estimate	77.00	Pre-Tax Cost of Debt	5.3%	EV / Adjusted EBITDA	7.3	8.2
greggory.warren@morningstar.com		One-Star Price	103.95	Estimated WACC	9.0%	EV / Sales	3.3	3.7
Sector	Financial Services	Market Price	69.86	ROIC *	57.1%	Price / Book	2.9	3.2
Industry	Asset Management	P / FVE	0.91	Adjusted ROIC *	84.6%	FCF Yield	8.0%	7.2%
				* 5-Yr Projected Average		Dividend Yield	3.2%	2.9%
						(2017 Estimates)	(Price)	(Fair Value)

All values (except per share amounts) in: USD Millions	3-Yr Historical CAGR/AV	2016	Forecast 2017	2018	2019	2020	2021	5-Yr Projected CAGR/AVG
Income Statement								
Revenue		4,223	4,393	4,526	4,688	4,912	5,147	
Gross Profit		4,223	4,393	4,526	4,688	4,912	5,147	
Operating Income		1,800	1,821	1,886	1,961	2,070	2,181	
Net Income		1,190	1,159	1,181	1,226	1,298	1,371	
Adjusted Income		1,232	1,159	1,181	1,226	1,298	1,371	
Adjusted EPS		4.92	4.82	4.99	5.25	5.64	6.06	
Adjusted EBITDA		1,933	1,953	2,022	2,101	2,217	2,335	
Growth (% YoY)								
Revenue	6.6%	0.5%	4.0%	3.0%	3.6%	4.8%	4.8%	4.0%
Gross Profit	6.6%	0.5%	4.0%	3.0%	3.6%	4.8%	4.8%	4.0%
Operating Income	3.2%	-5.2%	1.2%	3.6%	4.0%	5.6%	5.3%	3.9%
Net Income	4.6%	-1.6%	-2.6%	1.9%	3.8%	5.9%	5.6%	2.9%
Adjusted EPS	8.1%	6.2%	-2.2%	3.7%	5.2%	7.4%	7.4%	4.2%
Adjusted EBITDA	3.8%	-4.6%	1.0%	3.5%	3.9%	5.5%	5.3%	3.9%
Profitability (%)								
Gross Margin	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Operating Margin	45.1%	42.6%	41.4%	41.7%	41.8%	42.1%	42.4%	41.9%
Net Margin	29.2%	28.2%	26.4%	26.1%	26.2%	26.4%	26.6%	26.3%
Adjusted EBITDA Margin	48.1%	45.8%	44.4%	44.7%	44.8%	45.1%	45.4%	44.9%
Return on Equity	23.4%	22.7%	20.1%	19.5%	19.2%	19.2%	19.3%	19.5%
Adjusted ROIC	101.0%	114.7%	111.2%	95.6%	80.5%	71.3%	64.6%	84.6%
Adjusted RONIC	143.6%	355.5%	8.8%	8.5%	16.5%	23.4%	23.4%	16.1%
Leverage								
Debt / Capital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Debt / EBITDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA / Interest Expense								
FCFE / Total Debt								
Cash Flow								
Dividends per Share		2.16	2.27	2.38	2.50	2.63	2.76	
Free Cash Flow to the Firm		735	993	804	851	913	980	
FCFE (CFO-Capex)		1,193	1,338	1,359	1,416	1,488	1,570	
Dividend Franking		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Dividend Payout Ratio		45.5%	47.1%	47.7%	47.6%	46.5%	45.5%	

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