

Active Indexing with ETFs: *Disruption and Implications*

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Exchange-traded funds (ETFs) have been used as investment products and trading vehicles for almost three decades. ETFs have grown globally to more than \$5 trillion in assets and represent a significant component of trading activity on global exchanges.¹ The success of ETFs is intertwined with the shift of investment assets into more index-based approaches, along with the quest for greater transparency in portfolio management and lower management fees.

The experience of two deep bear markets in the relatively short span of 10 years (2000 through 2009) laid the foundation for the fast pace of ETF adoption. The steep markdown in investor wealth in these extended bear markets led investors to rethink the buy-and-hold approach to investing and to shift some assets into more dynamic strategies that modify holdings as market conditions change. ETFs improved the ease of diversifying into asset classes such as fixed income and commodities. More recently, rules-based, transparent, and active strategies have also become available

in ETF packaging, fostering a shift in active management toward a greater focus on risk factors and investment themes.

Today, the disruptive power of ETFs has shifted into high gear in investment management, distribution, and financial markets, impacting all types of investors, how they access financial products, and the price they pay for investment services. This article discusses the issues confronting providers of investment management services and suggests some new directions and approaches aimed at resolving such issues.

ETFs AS A DISRUPTION TO THE INVESTMENT MANAGEMENT PROCESS

Three main areas of disruption to investment management arise from the growth of ETFs. First, the product is used by all categories of investors, ranging from individuals and family offices to asset managers and large asset owners (such as pension and sovereign wealth funds). Second, most ETFs represent index or active rules-based strategies, in contrast to the discretionary portfolio management most often associated with mutual funds, institutional active funds, and hedge funds. Third, index providers play a key role in product development, marketing, and the strategy education process.

¹ This figure represents total global assets for the global ETF and exchange-traded product (ETP) industry as of March 2019, as reported by Deborah Fuhr, managing partner at ETFGI, a leading independent research and consultancy firm that covers trends in the global ETP industry and is based in London (ETFGI 2019).

ETF APPEAL TO ALL INVESTOR CHANNELS AND ACROSS A RANGE OF HORIZONS

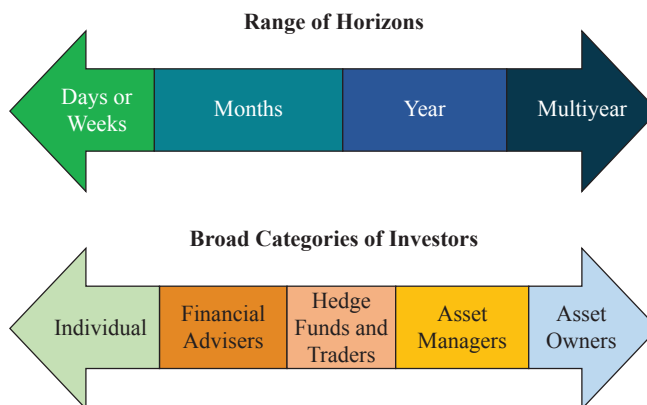
Index strategies have been around since the 1970s, primarily employed in long-term asset management strategies and managed by a few large index-based asset managers and by large pension funds with in-house management. These early index-based strategies were embedded in investment products that targeted specific categories of clients. Individual investors accessed index products in the form of mutual funds. Institutions, often with assistance from consultants, typically used separately managed or comingled accounts with lower fees than mutual funds. Each product and investor channel had its own sales force and approach to marketing and compensation for sales people who assisted in raising assets.

ETFs were different from the start. As packaged investment strategies accessible on stock exchanges via brokerage accounts, their appeal has been more universal. ETFs democratize index strategies to make them available on the same cost basis to virtually all categories of investors, regardless of whether they have short- or long-term horizons. This range includes individuals, financial advisers, hedge funds, family offices, proprietary trading firms, asset managers, and institutional asset owners. It is hard to think of another financial product (except for checking accounts and government securities) that is accessible at the same cost and on the same platform to both small and large investors.

ETF usage spans not only a wide range of investor types but also a continuum of investment holding periods ranging from hours to multiple years. Before ETFs, index derivatives such as futures and options were the preferred tool for tactical and short-term strategies. However, ETFs changed that dynamic as well. From their early days, ETFs similar to exchange-traded derivatives were used predominately for tactical trading, including shorting. Products such as SPY (the SPDR S&P 500 ETF), QQQ (the Invesco QQQ Trust ETF), IWM (the iShares Russell 2000 ETF), and EEM (the iShares MSCI Emerging Markets ETF) were seen primarily as an innovation that extended tradable index exposure beyond futures and swaps to a broader choice set in a friendlier operational structure. In the US, the most actively-traded ETFs turn over their assets every 3 to 6 weeks compared to the average ETF holding period of almost half a year (measured by assets divided

EXHIBIT 1

ETFs' Unique Attraction to Investors across All Channels of Investing*



Note: * For illustrative purposes only.

by average daily dollar volume).² ETF traders consider them as stock alternatives and value their liquidity for quickly and easily modifying asset class, sector, and country exposures. To such traders, the fund's investment management is simply an operational aspect of a tradable index product.

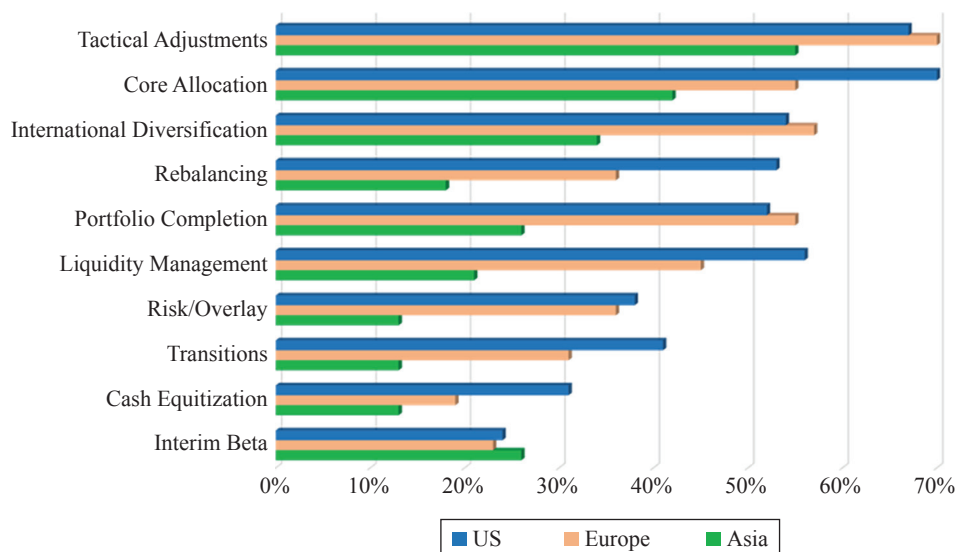
Tactical strategies continue to rank as a primary use of ETFs, but the growth in investor adoption of ETFs in the last decade is related more to longer-term investment-focused applications. As evidence of the breadth of applications, Exhibit 2 depicts the strategies used by institutions by global region, based on Greenwich Associates surveys.³ Although tactical adjustments are still the largest ETF application globally, in the US, the percentage of institutional investors using ETFs as a core allocation now exceeds, by a narrow margin, those using tactical applications. Other significant applications include longer-horizon strategies such as core allocation, international diversification, and portfolio completion.

² This figure is based on average dollar assets divided by dollar daily trading volume over the 45 trading days ending on March 28, 2019, using data from FactSet for the iShares iBoxx \$ High Yield Bond ETF, IWM (the iShares Russell 2000 ETF), and DIA (the SPDR Dow Jones Industrial Average ETF). Also, a host of US sector ETFs with high turnover are used as tactical trading tools.

³ For European and Asian data, Greenwich Associates 2017. For US data, Greenwich Associates 2018.

EXHIBIT 2

Institutional Investor ETF Strategy Usage



Sources: For European and Asian data, Greenwich Associates 2017. For US data, Greenwich Associates 2018.

Among the key findings from the 2018 Greenwich Associates survey of institutional ETF usage in the US: Almost half (44 percent) of the survey participants invested in rules-based active or smart beta ETFs in 2017. Fixed-income ETFs are cited as the biggest area of planned future growth, with increasing interest in multi-asset strategies. As ETF holdings have become more strategic, the average holding period shifted to more than 2 years for more than half of the institutional participants in the Greenwich Associates 2018 US survey. ETFs also replace some portion of mutual fund holdings for registered investment advisers and financial advisers employed by brokerage firms. Most robo-advisor strategies employ ETFs as the primary vehicles for allocating investments for their clients, which tend to be smaller in terms of investable assets.

This prominence of ETF packaging for longer-term investment strategies across all categories of investors suggests some new directions for asset managers, consultants, and investors. Just as the first ETFs were an extension of institutional index fund products by large index managers to attract retail investors, the logical extension for an asset manager is to inventory the most successful asset management products as candidates for ETFs. Investment managers, if they have not already done so, should consider offering their largest products

in an ETF format to broaden the range of clients who access their most appealing strategies. This approach represents a significant growth opportunity, especially now that ETFs include sizable assets in fixed-income and more active strategies (beyond market-cap weighting).

Some existing fund products might require a slight modification given the need to disclose holdings daily. Such products could be recast in the form of rules-based strategies and then offered at lower fees. For example, a multi-asset strategy—or a quantitatively based equity or fixed-income strategy originally structured as a commingled trust for institutional investors—could also be offered in an ETF format to make it accessible to registered investment advisers (RIAs) and financial advisers. The ETF might even appeal to some institutional clients as well. In this way, the asset manager can build on the power of individual brand and distribution capabilities, bringing incremental assets into the firm or mitigating some of the outflow attributable to competition from ETFs offered by other managers.

Traditionally, consultants have largely ignored ETFs as investment options for their clients based on the premise that they are primarily index products for retail investors. To incorporate ETFs into the investment process, the staff of a pension fund or other asset owner must be large enough to evaluate the performance, risk,

and portfolio fit on their own. They also must have the capability to trade ETFs directly. This dynamic leads to a gap in ETF usage for small to medium-sized institutions, which rely more on consultants in the investment decision-making process and on their asset managers for trading.

Pension funds and other asset owners that rely heavily on consultants should encourage them to include ETFs in asset manager searches, benefiting from the due diligence processes that the consultants have applied to other investment options. The new systematic active and smart beta ETFs are the most logical candidates for consultants to analyze for their clients. For multi-asset ETFs, as well as for factor-based equity ETFs, many choices are available that vary by index construction rules and active share. Similarly, defined contribution plans should be looking to find consultants and other service providers that help their beneficiaries make investment choices that go beyond mutual funds and use brokerage options that incorporate ETF recommendations.

QUANTITATIVE RULES-BASED STRATEGIES THAT TRUMP QUALITATIVE DISCRETIONARY PORTFOLIO MANAGERS

The dominant method of portfolio management for decades relied on an individual portfolio manager or a team that was trusted to define the strategy, manage the portfolio construction, and deliver performance consistent with the fund's investment objectives and risk profile. The new form of active management implemented with ETFs is centered on a top-down approach (or active indexing), where investors actively allocate across asset classes, factors, industries, and thematic baskets. This strategy is disruptive in that the choice set for this type of discretionary investment management is made up of indexes rather than individual stocks or bonds. Strategies packaged in ETFs also rely more heavily on quantitative techniques or market data information than on qualitative fundamental analysis of company accounting data and potential product revenue growth. These smart beta strategies and quantitative approaches to multi-asset investing all follow rules-based strategies where a quantitative approach is applied to historical security prices

and fundamental data sets for building an investment process.⁴

With active strategies packaged into these pre-defined indexes, investment decision-making shifts from a discretionary portfolio manager to a process of adjusting ETF holdings based on the index methodology that identifies the rules for selecting the security holdings and describes how these securities are assembled into a portfolio to represent a market segment, risk factor, or investment theme. Sometimes the index innovation is simply in the weighting applied to a given set of securities (such as equal, fundamental, dividend, risk, or earnings weighting) that results in an active tilt away from a market-cap-weighted portfolio.

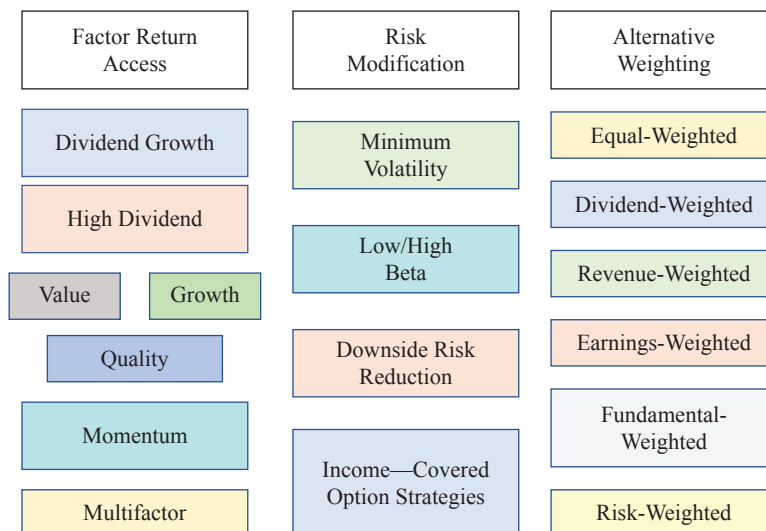
As an example, Exhibit 3 shows some of the factor-selection criteria currently found in smart beta equity ETFs. These criteria are grouped into strategies aimed at accessing factor returns, modifying risk, or seeking performance from alternative weighting. The methodology, performance history, and portfolio features of these systematic stock selection strategies are available from the index provider as well as the ETF managers' websites. These rules-based strategies are also gaining traction in fixed-income and commodity ETFs. For example, some corporate bond ETFs systematically hedge duration risk and apply alternative weighting to market capitalization. Some multi-factor commodity ETFs focus on dynamic allocation strategies across the range of choices in the commodity space.

The availability of a wide range of index-based investment choices representing segments of an asset class (or factors within an asset class) enhances the role played by RIAs, financial advisers at brokerage firms, specialty ETF managers, and so-called robo-advisors. They can charge fees for the service of choosing and managing ETFs that have the best prospects for delivering return and risk consistent with the investors' preferences. In addition, multi-asset investment products are also available that allocate ETFs across asset classes and risk factors. These investment products are typically based on a quantitative approach combined with a risk target, portfolio manager insights on the investment outlook, economic

⁴The size of assets in smart beta ETFs has been estimated at approximately \$700 billion, or between 10 percent and 15 percent of global ETF and note assets. In a June 2017 report, Morningstar identified \$707 billion in assets (Morningstar 2017). ETFGI (ETFGI.com) identified \$680 billion in smart beta products as of the end of January 2019 in a press release dated 3/1/2019.

EXHIBIT 3

Smart Beta ETF Strategy Examples, Grouped by Categories*



Note: * For illustrative purposes only.

and financial conditions, or a bit of all of these. These multi-asset strategies are, in effect, the new version of balanced funds or dynamic asset allocation.

INDEX PROVIDERS AS A KEY PART OF INVESTMENT DECISIONS

In general, an investment manager develops and manages the portfolio strategy used in a fund product and serves as the main source of information related to how the fund performance relates to the strategy investment objectives. ETFs, on the other hand, can be evaluated by looking at the return and risk history of the benchmark index, available from index providers such as S&P Dow Jones, Morgan Stanley Capital International (MSCI), Financial Times Stock Exchange (FTSE) Russell, IHS Markit, and Bloomberg. These index firms have now become significant components of the ETF and broader investment management business, delivering information on the rules of strategy index construction, the holdings over time, and the performance metrics of the index strategy. Depending on the regulatory environment, ETF sponsors that manage products benchmarked to an index may not be permitted to disclose back-tested index performance to the public; rather, performance data must be sourced from the index provider.

Index providers receive a portion of the management fee in exchange for their provision of the data, communications, marketing, product development, and strategy education. Their business models focus on growing the assets indexed to their benchmarks and attracting more fund managers to work with them to create new indexes that will be the basis for future ETFs and index fee income. Index providers at times play a role in the development and refinement of the investment concept. They also supply marketing resources, promoting indexes with advertising, webcasts, social media content, and the like. In addition, index providers are involved in supplying information that is used in the due diligence process and in ongoing performance assessments of index-based ETFs.

To reduce the fee revenues going to index providers, some asset managers choose to take a larger role in developing their own benchmarks for their funds (self-indexing). A third-party index calculation agent might need to be engaged (at a lower fee) to ensure independence and accuracy in ongoing benchmark pricing and application of the index methodology. (In some cases, managers also appoint an advisory board consisting of outside investors.) This self-indexing approach is most feasible for established asset managers that are trusted by investors to have the expertise and resources necessary to develop and maintain a strategy index.

The manager must then assume the responsibilities of providing education and marketing not just for the fund product but for the index, supplying content for the index website about the strategy, producing performance reports, and engaging in other index marketing activities.

ETF IMPACT ON EXCHANGES AND LIQUIDITY PROVIDERS

Although the success of ETFs is commonly measured in terms of the assets under management and the diversity of investment products offered in ETF packaging, of comparable importance is the significant component of trading activity that ETFs now represent. These products have upended the exchange and trading businesses to a similar degree as they have impacted asset management. Many short-term investors think of ETFs more as alternative trading vehicles to stocks or bonds than as fund products and thus are more focused on trading costs than on management fees. Since 2007, the dollar volume of ETFs traded in US markets has been consistently in the range of 20 percent to 30 percent of total volume. ETF trading typically increases as a portion of overall volume during periods of higher-than-normal volatility. For example, in the volatile months (such as February, October, and December 2018), the percentage of total US trading volume represented by ETFs reaches levels exceeding 30 percent.⁵ This development comes as investors look to ETFs as the easiest means of reducing risk or taking advantage of perceived market overreactions that create trading opportunities. Since 2007, however, the portion of ETF trading represented by broad US equity index ETFs has fallen from 90 percent to 50 percent. Fixed-income, international-equity, US-sector, leveraged and inverse, and alternative ETFs have now grown to represent a more significant proportion of ETF trading activity on US exchanges.⁶

As more and more asset managers launch ETF products, the business of acquiring ETF listings for exchanges and being designated as a market maker for brokers has become highly competitive. Exchanges compete for ETFs by offering state-of-the-art technology that can deliver services to facilitate launching, trading, and disseminating quotes for ETFs. Exchanges also have

begun offering index calculation services. The trading technology of ETF liquidity providers is a key ingredient in the ease with which investors can access these products. Market makers must provide the bid and offer prices for ETFs on an ongoing basis, drawing on the prices of underlying securities and the cost of hedging positions. Market microstructure and exchange rules must be cognizant of the linkages between ETF price discovery and the trading of the underlying securities. The Flash Crash in May 2010 and the market disruptions at the opening of trading in August 2015 (after extreme overnight volatility in China) were a wake-up call to exchanges, alerting them to how ETF prices can be distorted if market makers cannot trade the underlying stocks.

ETFs are distinctly different from other fund products, which are bought or sold at their daily net asset value (NAV), compiled from the closing prices of the holdings. To effectively use ETFs, institutional asset owners, financial advisers, and individuals must have operational knowledge on how best to execute ETFs with different liquidity profiles relative to the target transaction size. ETF sponsors often assist in this process by using ETF capital markets specialists who can help in sharing information on best practices in trading ETFs, assessing costs, and developing trading strategies based on a specific ETF's liquidity features.

Another aspect of the recent changes that ETFs bring to equity trading is the growing significance of thematic ETFs. These narrow-based baskets of stocks are designed to capture a market niche representing innovative trends that are not well represented by traditional sector or industry classifications. Stock investors are weaving thematic strategies packaged in ETFs into their bottom-up investing process, serving as an alternative to selecting individual securities based on active views arising from fundamental or technical analysis. Some thematic ETFs have seen significant flows and trading in emerging technology areas such as cybersecurity, robotics, blockchains, artificial intelligence, industrial innovation, infrastructure, natural resources, and socio-economic trends (such as millennials or the aging population). Narrow industries such as regional banks, gold mining, and emerging market consumer themes also are included in this category of ETFs.

ETFs are especially disruptive to fixed-income trading and price discovery. Before ETFs, most bond trading was conducted one security at a time in a dealer

⁵Lin 2019, pp. 2, 13.

⁶Lin 2019, p. 13.

market via phones or messaging systems on quote terminals. ETFs based on fixed-income indexes allow investors to view continual price discovery for portfolios of debt securities in an agency market. With ease of access across a range of investor categories, ETFs such as those based on investment-grade and high-yield indexes—such as LQD (the iShares iBoxx USD Investment Grade Corporate Bond ETF) and HYG (the iShares iBoxx USD High Yield Corporate Bond ETF)—are quick to respond to shifts in credit risk. Both LQD and HYG are among the most liquid ETFs in US markets based on the daily dollar amounts traded relative to their assets.⁷ Premiums and discounts to NAV often reflect bond prices that are lagging the more rapid price discovery that is characteristic of ETFs. Now, a portion of the liquidity of bonds in indexes is driven by agency ETF trading, and bond traders look to fixed-income ETF managers as potential customers for their inventory, linking individual bond and bond portfolio trading.

IMPACT OF ETFS ON THE DISTRIBUTION OF ASSET MANAGEMENT SERVICES

The growth of ETFs as a preferred packaging option for investment strategies also changed the way that investors source investment information about these products, impacting the function of the fund sales and distribution. The capability to enter and exit investment strategies via online brokerage accounts redefined the way that investment products are marketed, not too dissimilar from the way that online shopping redefined the retail sector.

With mutual funds, the salesperson (often called a wholesaler in the retail space) is a primary resource for communicating investment features to a prospective investor. Success in effectively increasing product awareness, helping in the due diligence process, and gathering new assets can be directly measured, assessed, and rewarded. In traditional fund products, the asset manager has visibility into each investor's fund account and can measure inflows and outflows.

On the other hand, in ETF distribution, the connection among sales expertise, effort, and results is not as direct because the funds flow occurs through

a brokerage salesperson or electronic access brokerage account. The brokerage firm receives commission revenue associated with the ETF purchase or sale—a small amount compared to the prospective fee revenue that accrues to the asset manager and indirectly to the index provider. Most brokers have limited in-depth knowledge of the investment features of an ETF. Consequently, the asset manager salesperson is still needed to provide a broader set of information to the investor about the ETF strategy features, performance metrics, portfolio management process, benchmark index, and so on; however, the impact of this activity in securing funds flows is more difficult to monitor and measure.

The timing of ETF funds flows via creations or redemptions can be days after the investor purchases the ETF because brokers who serve as authorized participants wait until they have net long or short exposure that is as large as a minimum creation unit for the ETF. Also, the potential rewards from sales effort for index-based ETFs are typically lower than those for an active fund product. Therefore, the sales staff or asset managers are less incentivized, all else being equal, to highlight ETFs over mutual funds as a solution to an investment opportunity.

Consequently, to provide investors with a perspective on the full suite of available investment products, investment managers adapt their marketing and distribution function to give ETFs appropriate focus in their product line. Some investment managers add ETF product specialists to assist in the distribution process. Others alter distribution compensation models to recognize the broader revenue opportunity by bringing new investors and assets into their full suite of investment product offerings. ETFs are seen as a means of providing an avenue to communicate about more sophisticated higher-fee offerings and to build the overall customer relationship.

For ETFs, some of the key information about the strategy is best delivered by the index benchmark calculator rather than the asset manager's salesperson. Back-tested index strategy data, for example, generally come from the index provider. This route can be a positive feature by ensuring that a third party authenticates the features of the strategy under different historical market conditions. However, it can also be a hindrance if the asset manager does not know what questions the investor would like addressed and has only indirect control over the quality of services provided by the index manager.

⁷HYG and LQD are ranked in the top 20 US ETFs based on asset turnover, based on assets as of March 28, 2019, divided by the median dollar volume for the 45 preceding trading days. Source: FactSet.

To effectively sell their products and retain investors, the sales staffs of ETF sponsors must also be equipped to have conversations about the fit of an ETF into an investment portfolio as well as information about the specific product versus a benchmark, and they need to be aware of any index or third-party research related to the ETF benchmark. In addition, most ETF managers employ capital markets staff members as a component of distribution services to answer investor questions about issues such as liquidity, trading costs, and the best method of trading. Most investors who have used ETFs for some portfolio function also tend to consider ETFs along with mutual fund products for investment applications. To be effective, mutual fund or institutional product sales staffs must be aware of competitive products in the ETF space and must be able to discuss the benefits of their products compared to ETF products that fit within the same style, size, or risk factor category.

WHAT LIES AHEAD

ETFs are clearly on a path to becoming more mainstream products but are still in the early stages of the full scope of their impact on the asset management and trading businesses. The growth of assets and low fees have been a wake-up call to traditional managers, and many have already launched (or are considering launching) ETF products. However, more changes are likely as indexing further penetrates the world of active management and as the portion of the asset management business devoted to wealth management grows relative to that portion targeted to institutional investors.

The shift is underway to a broader focus on more active top-down investment decision-making where ETFs are a good fit, especially given the performance advantage of lower-fee products. Many registered investment advisers offer services that include portfolio allocation, customized risk management, and retirement planning. Such advisers are sensitive to the impact of fees embedded in the investment products they use on the performance outcomes for their clients. Now, smart beta strategies and thematic investing packaged in ETFs are rapidly gaining ground across all classes of investors as a middle ground between conventional discretionary active management and passive investing. Multi-asset ETFs and funds that hold ETFs are also likely to rank

as a key component of the next generation of active management. Like target-date funds, these products can be customized to the investor's horizon, with more of a tactical or strategic approach to rebalancing and risk targets.

Defined contribution (DC) pension plans have become the primary vehicle for retirement savings, and they are virtually all invested in mutual funds, with recordkeeping structured around asset flows at the end of the day at closing NAVs of the funds. Some DC plans offer a brokerage account option, where investing in ETFs is possible at the discretion of the employee, but the use of this option is limited as many employees feel that they do not have the investment expertise to select and manage investments on their own. As pension plan recordkeepers eventually adapt to make ETFs more accessible choices in DC plans, ETFs will move quickly to grab pension market share from mutual funds.

Over the decade since the financial crisis, the growth of ETFs has benefited from a favorable market environment of generally rising stock and bond prices. The road ahead may be less smooth. When markets become more volatile and suffer significant declines, innovation and change often are paused. In past periods of rising risk aversion, investors turned to the most liquid components of their portfolios to lower risk. In these periods, the impact is felt most by ETFs benchmarked to market-cap-weighted indexes representing asset class segments with higher risk profiles, for example, emerging-market equity, small-cap equity, technology-sector equity, and investment-grade and high-yield credit. In addition, the continued success of systematic active (smart beta) and discretionary active ETFs depends on their capability to deliver competitive risk-adjusted performance.

Active indexing via ETFs will continue to transform investment management, distribution, and financial markets. Investors are feeling more empowered and are demanding more—from access to pricing data to greater transparency to an expansion of the variety of investment choices—and technology is continuing to evolve to facilitate these advances. As ETFs penetrate more deeply into the world of active management, they are likely to transition even more into the mainstream as trading tools and portfolio holdings for all classes of investors.

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