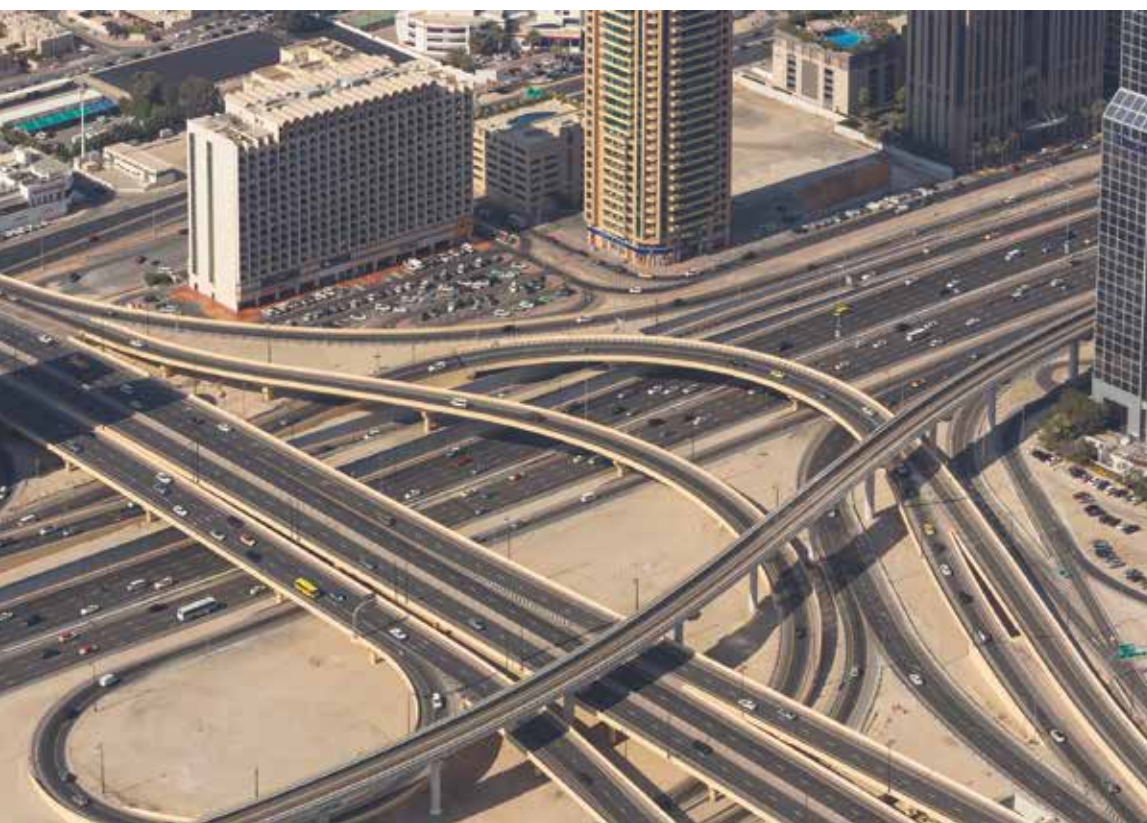
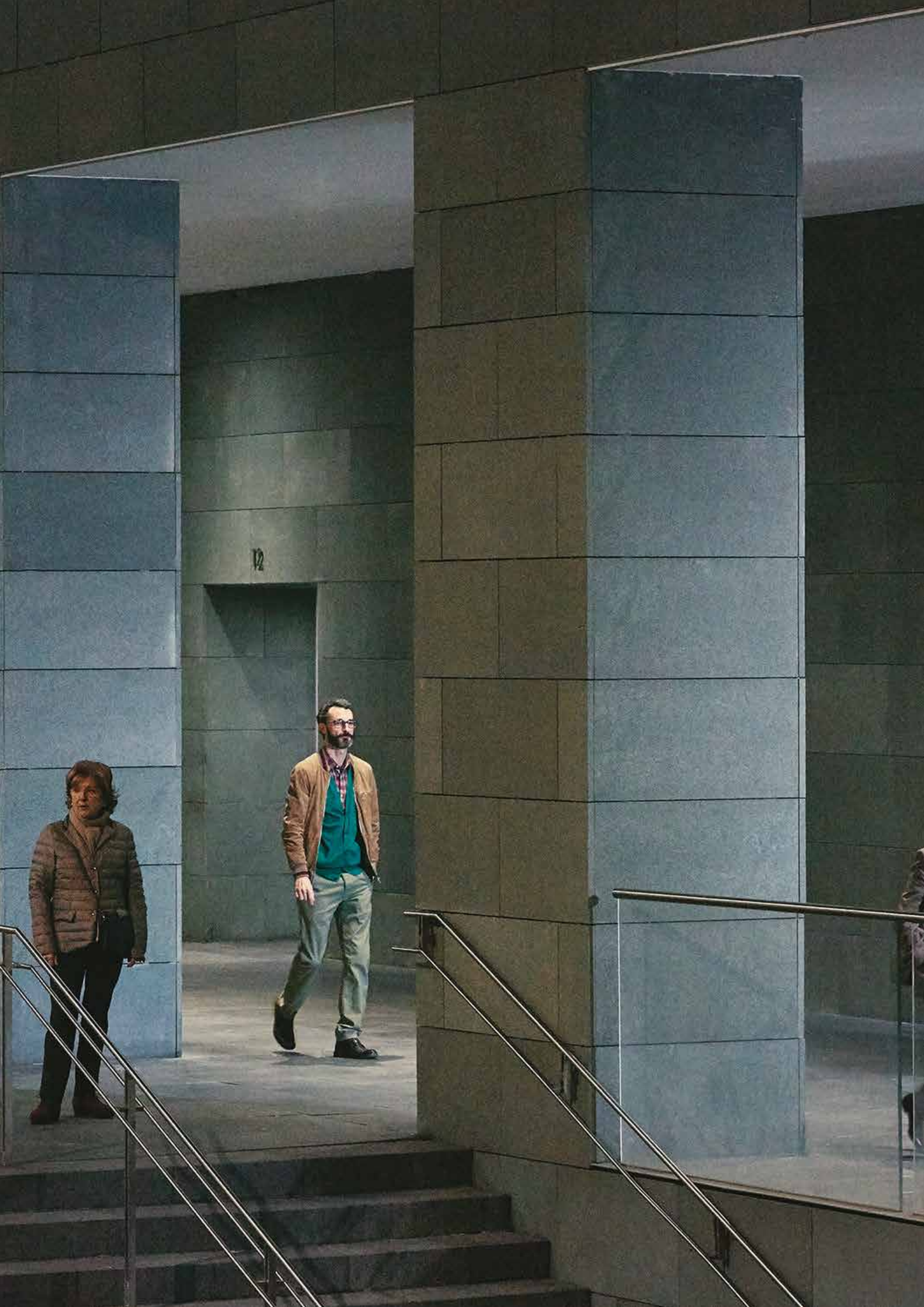


The global ETF (Exchange Traded Fund) industry continues to experience rapid change, presenting both opportunities and challenges. We highlighted a number of key themes in our successful publication called 'ETF 2020: Preparing for a new horizon', including global growth, regulations, distribution channels, technology and investor education. Building upon these ETF 2020 themes, throughout this paper, we highlight insights gained from our latest ETF survey as well as PwC perspectives on key developments which will help drive further ETF growth, including products, markets and distribution. Successful ETF firms will capitalise on these opportunities, address challenges and differentiate themselves from increasingly crowded markets across North America, Europe and Asia.

ETFs: A roadmap to growth





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Executive summary

We are pleased to share the perspectives we have gained in our 2nd Annual Global Exchange Traded Funds (ETFs) survey entitled “ETFs: A roadmap to growth”. ETFs continue to dominate flows, setting a record US\$351 billion in global flows for 2015.¹ Regional ETF record flows were achieved in Europe and Canada, while the US and Asia regions approached near-record flows in 2015.² Based on a variety of factors outlined in this publication, the survey participants expect even more ETF growth across North America, Europe and Asia, with global ETF assets expected to exceed US\$7 trillion by 2021. Based on our Global ETF Growth Model, we agree with survey participants’ expectations.

About the survey

PwC surveyed executives from approximately 60 firms around the world in 2015 using a combination of structured questionnaires and in-depth interviews. More than 70% of the participants were ETF managers or sponsors, with the remaining participants divided between asset managers not currently offering ETFs and service providers. Participating firms account for more than 80% of global ETF assets. We express our sincere thanks to those who participated in this survey.

¹ BlackRock, “BlackRock Global ETF Landscape: Industry Highlights,” December 2015.

² Ibid.



We identified a number of themes with respect to ETFs, which we will describe in more detail throughout this paper.

Growth – The ETF industry has achieved tremendous growth since its inception in 1993. We expect accelerated growth over the next five years, with a focus on new markets, expanding distribution channels and asset classes.

Distribution – The ETF market has become increasingly crowded, particularly in North America and Europe. Successful firms will likely need to invest in investor education, establish strong distribution channels to gather assets, and differentiate their products in these congested markets.

Products – Today, the majority of global ETF assets are in passively managed investment products. However, over the past few years there has been an increased focus on smart beta investment products, which are structured around factors other than market capitalisation, such as dividends, earnings, value, momentum, quality and size. Many of the firms that we have spoken with are also evaluating opportunities to launch fixed-income and actively managed ETFs.

Regulation – Given the significant growth and innovation of ETFs, regulators across the globe continue to focus on investor protection, which may slow some of the growth and innovation of ETFs. However, there are also some regulations that may help to foster more ETF growth.

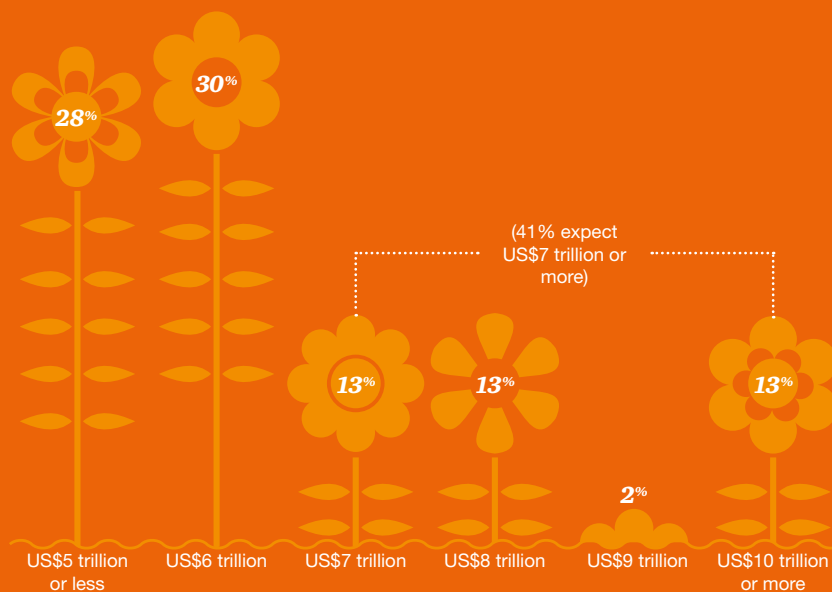
Technology – Advances in technology and data analytics with respect to product creation, markets and distribution have significantly contributed to the growth and innovation of ETFs. The continued digital evolution of the ETF industry will likely transform client relationships and expand distribution capabilities in terms of communications, sales and customisation.

Globalisation – Many ETF sponsors are seeking to expand their global footprint, which presents both opportunities and challenges. Firms will need to navigate complex regulations and tax laws, as well as establish strong working relationships with local capital markets to expand their ETF product offerings globally.

Growth

The ETF industry has experienced significant growth since its inception in 1993, and 2015 was no exception, with record global flows over US\$351 billion.³ Global ETF assets under management (AUM) have grown from US\$1,463 billion in December 2010 to US\$2,959 billion in December 2015, representing 102% cumulative growth over the last five years.⁴ Across the globe, we saw a number of new firms, including traditional asset managers, insurance companies and banks, launch ETFs in 2015 and we expect that trend to continue in 2016 and beyond. There was also an uptick in mergers and acquisitions in the ETF space in 2015 as firms sought to acquire assets, talent and distribution capabilities. Most survey participants expect that ETF growth will continue over the next five years, with more than 41% predicting that global ETF AUM will reach at least US\$7 trillion by 2021 (see Figure 1).

Figure 1: Prediction for Global ETF AUM over the next five years



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.
 Note: Due to rounding, the percentages may not add up to 100%.

³ Ibid.

⁴ Ibid.

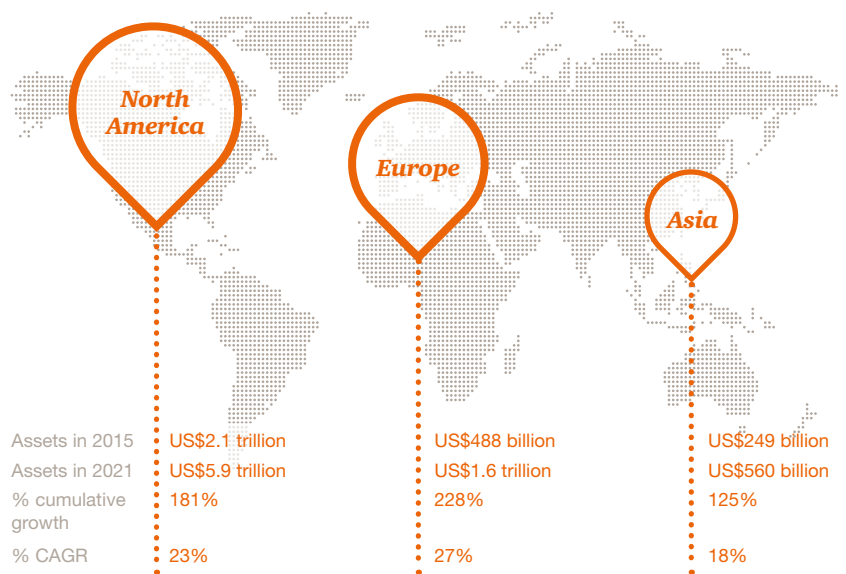


Regional growth

The North American ETF market dominates in terms of sheer size, but it also continues to have significant momentum. North American firms in the survey predicted ETF AUM to grow to US\$5.9 trillion by 2021, implying 23% cumulative annual growth (see Figure 2). The European ETF market, while smaller relative to North America, is expected to grow by 27% annually, reaching US\$1.6 trillion of AUM by 2021. Asia is currently the smallest market for ETFs. However, it appears poised for growth, particularly as markets become more integrated and regulations are further enhanced and streamlined to facilitate not only innovative products but also access to ETFs. Asian firms in the survey predict assets will reach US\$560 billion by 2021, corresponding to an 18% compound annual growth over the next five years.

Asian firms in the survey predict assets will reach US\$560 billion by 2021, corresponding to an 18% compound annual growth over the next five years.

Figure 2: Average predicted ETF assets in regional markets in 2021



Source: PwC analysis based on:
 1 ETFGI.com monthly newsletter, December 2015, accessed March 24, 2016, www.etfgi.com.
 2 Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.

Not surprisingly, better investor education is universally considered a key to further ETF growth in all regions.

Growth accelerators

New and improved distribution channels are seen across all regions as potential growth accelerators (see Figure 3). In Europe, lower distribution costs are also a key part of the puzzle. Not surprisingly, better investor education is universally considered a key to further ETF growth in all regions. In Asia, the various stock connect programmes to facilitate trading between Asian countries are widely seen as a factor that is likely to spur further asset growth. Firms in Europe and Asia also see fund passporting, which would provide another area of growth for expanding ETFs, whereas North American firms do not view this area as having significant growth opportunities. This is somewhat surprising, as many of the North American firms we have spoken with expect to expand globally over the next few years.

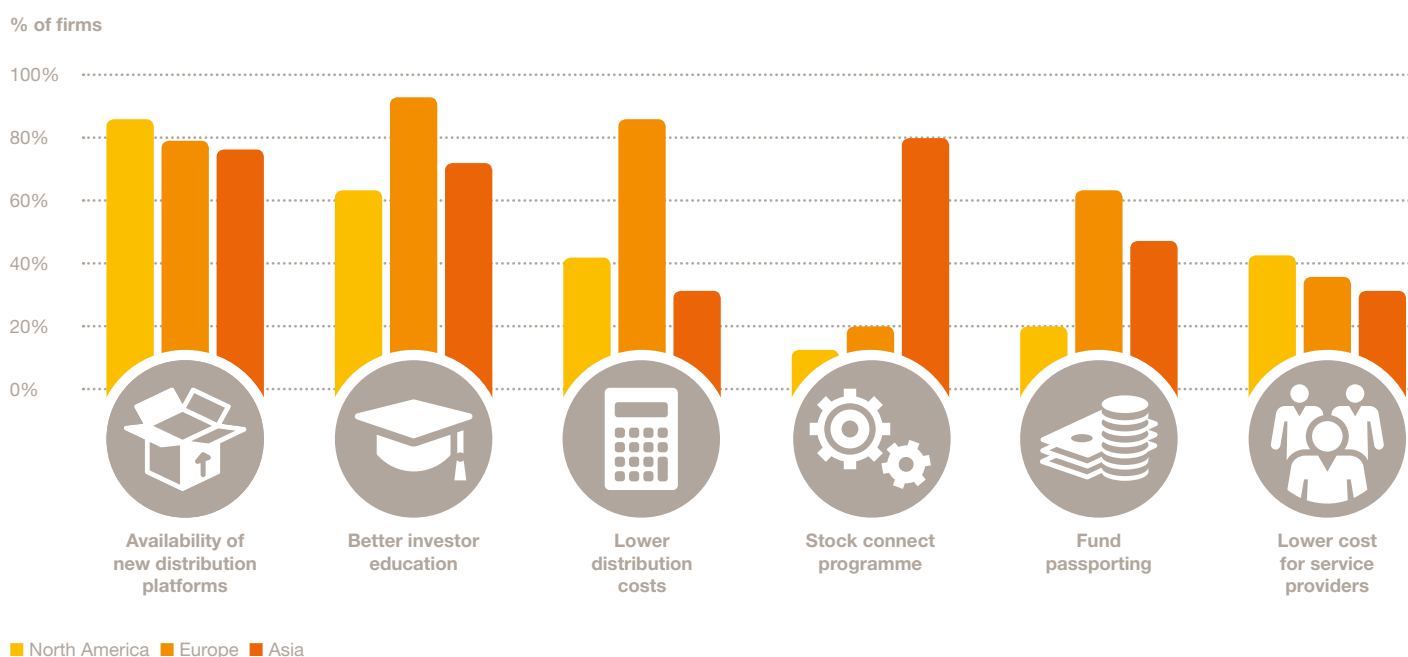
Potential differentiators in increasingly crowded markets

Corporate brand was deemed to be the most important factor in raising assets, with 60% of survey participants rating it very important; this is an increase from 34% in the prior year (see Figure 4).

In addition, institutional channels, differentiated investment strategy and investment track record are each considered to be very important by approximately 40% of survey participants.

Conversely, lower costs, proprietary distribution channels and tax efficiency are considered to be slightly less important in these crowded markets. It is somewhat surprising to us that only 35% of firms believe that lower costs are a potential differentiator in these increasingly crowded ETF markets, as we continue to observe downward fee trends, particularly with passively managed ETFs.

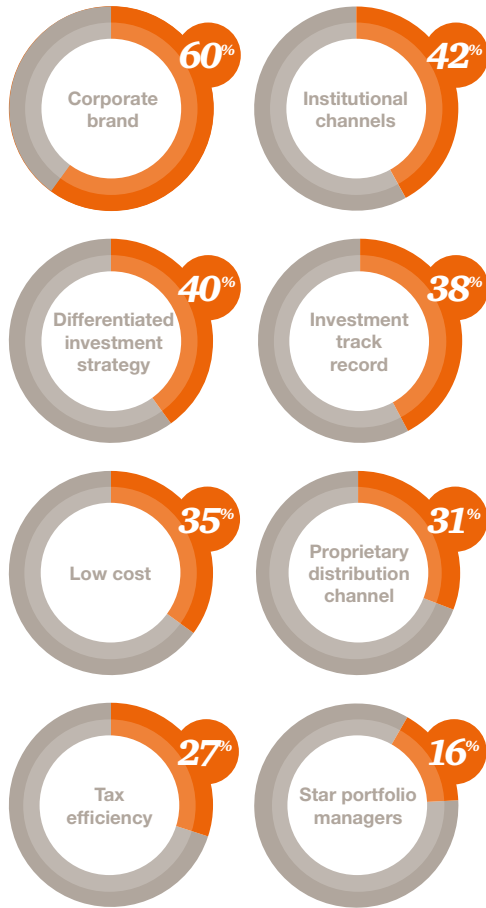
Figure 3: ETF growth accelerators by regional market



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.

Note: Percent of respondents that rate each area as likely to accelerate the growth of ETFs.

Figure 4: Percent that consider each factor to be very important for successfully raising ETF assets in their market



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.



The underlying growth scenarios alone, without any accelerants, result in a forecast of US\$6.2 trillion of global ETF assets by the end of 2021 (baseline scenario below), approximating a 13% combined annual growth rate, which is the same rate over the period 2010 through 2015.

In the high growth scenario, assuming a 12% positive impact of various regional accelerants, it would result in global ETF assets reaching approximately US\$8.2 trillion by 2021.

The roadmap to growth: What will it take to reach US\$7 trillion in assets?

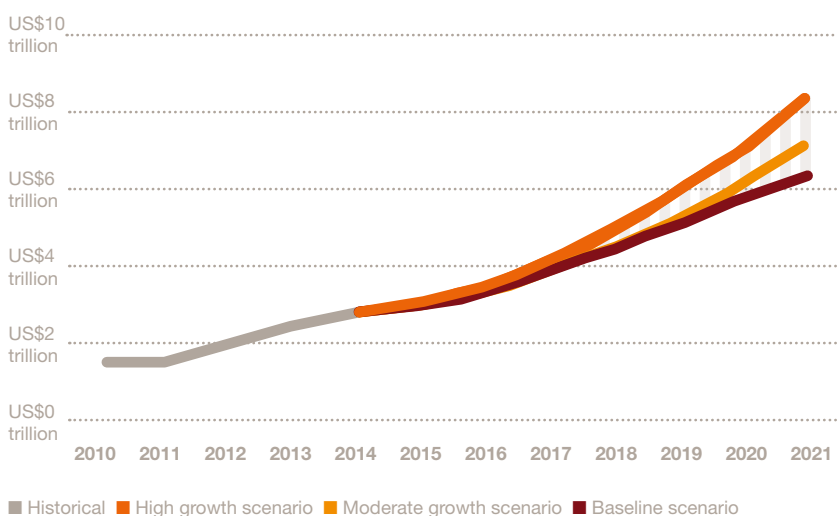
There are numerous factors that we outline throughout this paper that will help global ETF AUM to reach US\$7 trillion by 2021. These factors include further expansion of online platforms, growth of active ETFs, investor education, continuing shifts towards fee-based advice, and growing institutional use, as well as regulations that will likely create more integrated markets in Europe and Asia.

We created the PwC Global ETF Growth Model in an effort to project asset levels over the next five years while producing a better understanding of how various factors could affect growth trajectories (see Figure 5).⁵ Underlying growth assumptions are based on monthly historical flow data and average market appreciation, which serve as the foundation for the three different growth scenarios.

Accelerants are unique to each region and are generally assumed to produce higher levels of net new flows. The model accommodates some factors, such as regulatory hurdles, that may produce the opposite effect and act as a drag on growth. Each accelerant is defined as the percent of annual increase in incremental ETF flows that are projected to be produced within a given region.

The underlying growth scenarios alone, without any accelerants, result in a forecast of US\$6.2 trillion of global ETF assets by the end of 2021 (baseline scenario below), approximating a 13% combined annual growth rate, which is the same rate over the period 2010 through 2015. For the moderate growth scenario, we assumed a 6.5% positive impact of various regional accelerants, which would result in global ETF assets reaching US\$7 trillion by 2021. In the high growth scenario, assuming a 12% positive impact of various regional accelerants, it would result in global ETF assets reaching approximately US\$8.2 trillion by 2021.

Figure 5: Three scenarios for estimated global ETF AUM through 2021



Source: PwC analysis based on data from Strategic Insight: Global ETF Flow Watch for 2010 through 2015.

⁵ See Global ETF Growth Model Methodology section in the Appendices for more information.

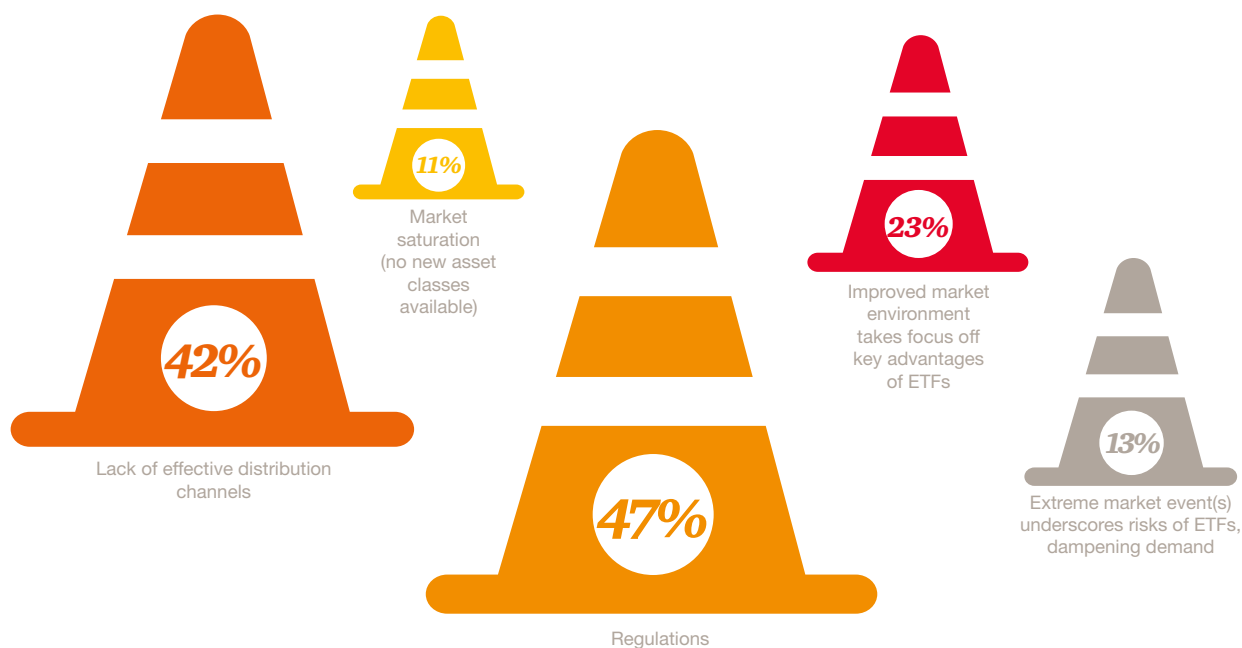
Obstacles to growth

We've explored a variety of factors that may boost ETF growth in the coming years, but there are also certain factors that may inhibit the growth of ETFs.

- Chief among these are regulations, with almost half of all survey respondents saying that increased regulations pose a major obstacle to growth in their region (see Figure 6). This number is somewhat surprising, as approximately 63% cited regulations as an obstacle to growth in our 2014 ETF survey.⁶

- Approximately 42% cited lack of effective distribution channels as a potential limiting factor for growth, compared to 53% that cited lack of effective distribution channels in our 2014 ETF survey.

Figure 6: Obstacles to future ETF growth



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.
 Note: Percent of respondents that indicate each area as a major obstacle to future ETF growth.

⁶ PwC, "ETF 2020: Preparing for a new horizon," January 2015, www.pwc.com/us/etf.

Distribution trends

We continue to see evolving trends with respect to the distribution of ETFs across the globe. Based on our survey, financial advisors, online platforms and retail investors are expected to be the top three segments driving global demand for ETFs over the next five years. Almost 86% of North American respondents expect that financial advisors will continue to create significant demand for ETFs over the next five years, contrasted with approximately 43% for Europe and Asia (see Figure 7). Further regulations against commissions in Europe will likely drive more financial advisors to use ETFs over the next five years.

It is interesting that online platforms replace wealth management platforms in the top three important areas for ETF demand in our survey results. There certainly has been a lot of activity with respect to firms either acquiring or building online platforms in 2015, particularly in North America. More than 71% of North American respondents expect online platforms to generate significant demand over the next five years, compared to approximately 43% for Europe and 36% for Asia. We would expect that the use of online platforms will follow the trends in North America and increase in these regions over the next five years.

Given the relative maturity of the North American ETF market, survey participants in this region expect that retail use of ETFs will be higher than in Europe and Asia. However, we would expect that further educational efforts in these regions, as well as online platforms, will help ETFs to make further retail market penetration over the next few years.

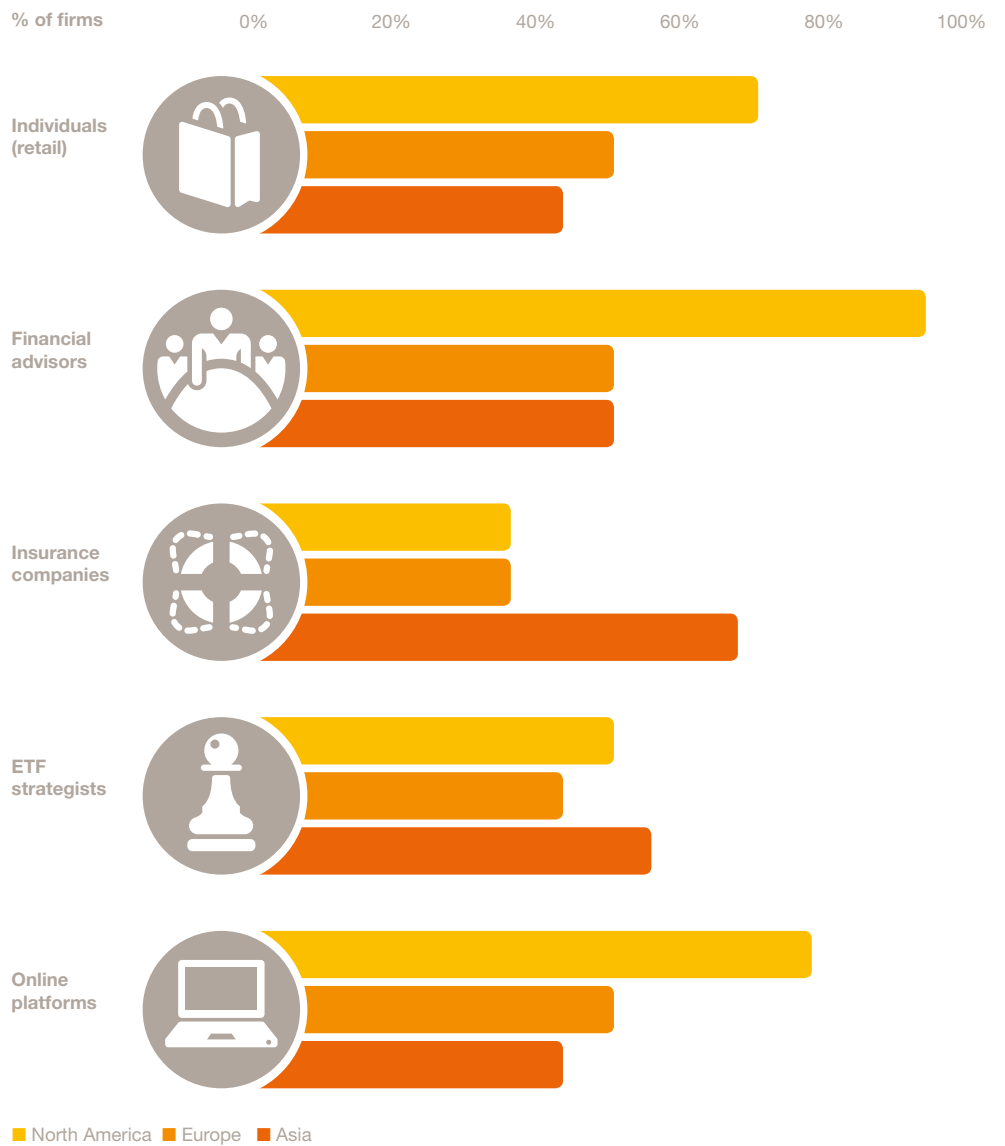
Insurance companies are also expected to have significant demand for ETFs in the coming years, which we highlighted in our ETF 2020 publication.⁷ A number of North American insurance companies entered the ETF space in 2015, either through acquisition or organic growth. We expect to see many more insurance companies across the globe become ETF issuers over the next couple of years as both ETF sponsors and investing in ETFs for their general and reserve accounts.



⁷ Ibid.



Figure 7: The expected level of demand for ETFs by investor segments over the next five years



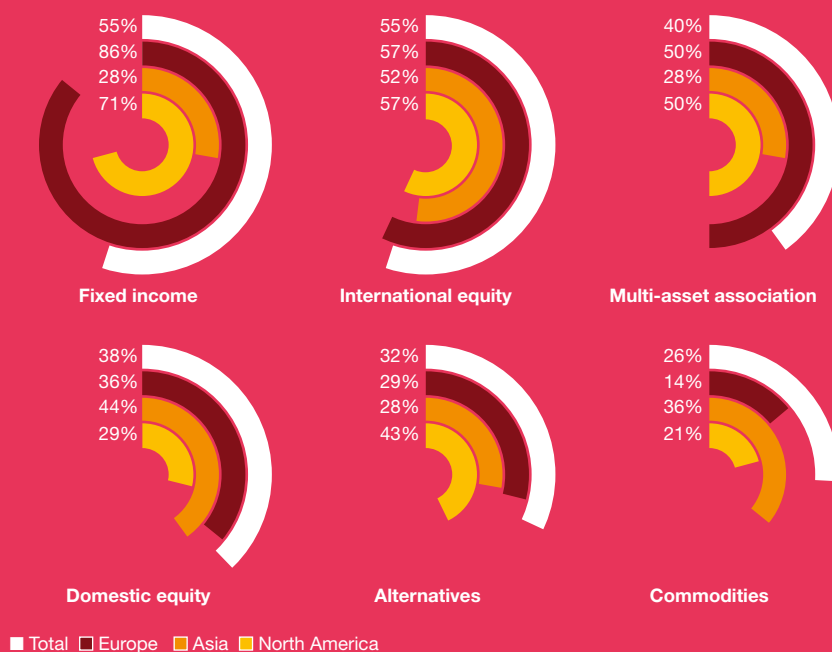
Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.
 Note: Percent of survey respondents that expect a significant level of demand for ETFs from each investor segment.

Products

Fund strategies and types

Areas of focus shift with market dynamics and investor demands. After many years in the shadows of higher profile equity ETFs, fixed-income ETFs are widely viewed as offering one of the best growth opportunities, particularly in Europe, where 86% of managers see bond ETFs as a major opportunity (see Figure 8). North America also expects there to be significant growth opportunities for fixed income ETFs, whereas Asia survey participants expect significantly less demand over the next few years. Asian firms are more likely to see potential in commodity ETFs, while US firms are more likely to see growth possibilities in liquid alternative ETFs.

Figure 8: Major growth opportunities for ETFs over the next five years



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.
 Note: Percent of survey respondents that expect asset class or investment strategy to be a major growth opportunity for ETFs.



Index products continue to serve as the foundation for growth, but survey respondents are more likely to point to non-traditional forms of indexing as the next frontier of growth (see Figure 9). Perspectives differ considerably by region, with Asian managers considering more potential in traditional index products while North American and European firms are by far the most enthusiastic about new forms of indexing, also referred to as smart or strategic beta.

Active ETFs have been slow to develop, except in Canada, where active ETFs comprise 14% of total ETF AUM.⁸ Active ETF strategies are also being manifested in new product filings and launches; however, the requirement for daily transparency has hindered growth and innovation in this space. Based on the 2015 survey results as well as our meetings with many asset managers, we have noted an uptick in interest with respect to launching active ETFs.

There also continues to be a lot of interest with respect to various periodically disclosed active models in the US. Currently, one active periodically disclosed exchange traded product recently launched in early 2016, while there are other proposed periodically disclosed active ETF models under consideration by the Securities and Exchange Commission (SEC).⁹

Figure 9: Types of ETFs that have the most potential for growth over the next five years



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf. Note: Respondents' ranking of the top four types of ETFs.

8 O'Hara, Clare, "Active ETFs finding fertile ground in Canada," *The Globe and Mail*, 1 February 2016, accessed 14 March 2016, www.theglobeandmail.com.

9 See North American section for further discussion.

Regulations

Regulations are seen across all regions as having an effect on ETF growth. Regulatory initiatives, such as promoting transparency of fees and low to no commissions, have largely benefited ETF sponsors relative to other investment products. However, given the significant growth of ETFs over the past ten years, regulators across the globe have focused on limiting the use of derivatives and slowing down the expansion of ETFs across all asset classes.

More than 34% believe that the growth and innovation of ETFs has been significantly impacted by regulatory and tax considerations (see Figure 10). An additional 49% believe that regulations and tax have moderately impacted the growth and innovation of ETFs. These results are somewhat surprising to us, as more than 56% in the 2014 PwC ETF survey indicated that regulations and tax rules have significantly impacted ETF growth and innovation. Further, there are many regulations that have either been enacted or proposed that will likely significantly impact ETFs in coming years. For further details, please see the Asian, European and North American sections respectively.

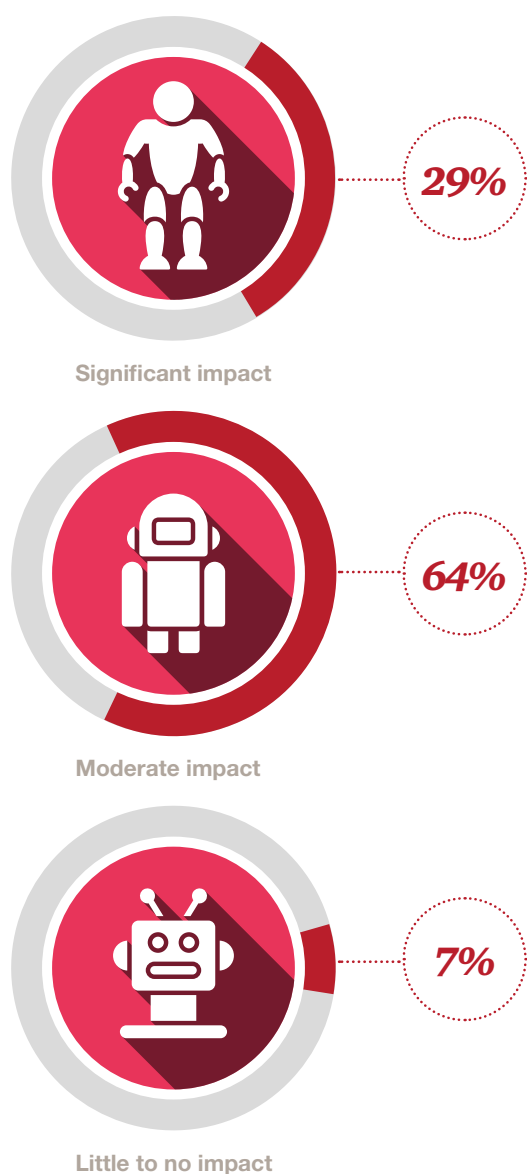


Figure 10: The majority of respondents expect regulatory and tax considerations to have a moderate impact on the growth and innovation of ETFs

Significant impact
 Moderate impact
 Negligible impact

Technology

Figure 11: The majority of North American respondents anticipate that robo-advisors will have a moderate impact on ETFs over the next five years



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf. Note: This question was asked to North American respondents only.

10 Citi GPS, "Global Perspectives & Solutions: Disruptive Innovations III," July 2015.

Successful ETF firms are likely to embrace the use of big data, digital technology and social media to help improve decision-making processes, streamline costs and transform client relationships in terms of communications, sales and distribution. These firms will also likely seek to reach a broader investor base through the use of online platforms, subject to local regulations.

Potential impact of robo-advisors/online platforms

ETFs have made some inroads with respect to retail investors, particularly in North America. However, many expect that robo-advisors and ETF strategists (e.g. an investment advisor that constructs portfolios of ETFs) are likely to accelerate the penetration of ETFs into portfolios of individual investors. While the term 'robo-advisor' is used broadly, there are clear distinctions in terms of how wealth management firms are delivering advice to their clients. We categorise the delivery of digital advice as follows:

- **Standalone robo-advisor** – targets self-directed investor, offering low-touch, investment advice and management algorithm that is optimised for fees, taxes and the client's personal situation.
- **Integrated robo-advisor** – targets both self-directed investors and advisors, enabling these firms to white label technology for firms to reach their clients. This group targets mass-market and mass-affluent investors.

- **Third-generation robo-advisor** – uses advanced technology, including artificial intelligence, to facilitate the creation of models that can be adapted to changes in factors such as wealth, age and markets.

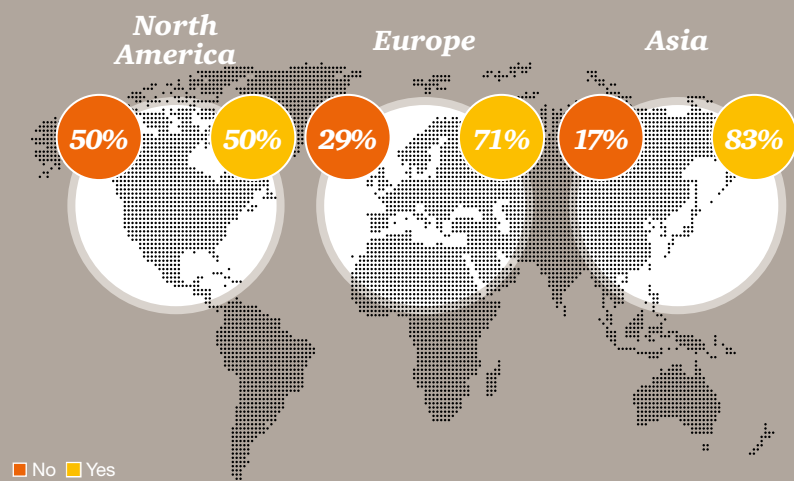
There have been many papers written about the potential growth opportunities for robo-advisors, including Citi Research predicting that robo-advised AUM for ETFs and other asset classes could grow to US\$5 trillion by 2025.¹⁰ We have also seen robo-advisors emerging in Europe and Asia over the last couple of years. However, contrary to these significant growth projections, only 29% expect robo-advisors to have a significant impact and 64% expect a moderate impact on ETFs over the next five years (see Figure 11). This is somewhat of a surprising result given the significant growth of robo-advisor AUM over the past few years, combined with recent entrance into the robo-advisor space by a number of large asset management firms, either through organic growth or acquisition of an existing robo-advisor.



Globalisation

Increasingly, we have heard from many ETF sponsors that they plan to expand their global footprint and offer ETF products across borders to compete outside of their home markets. For example, 83% of Asian firms expect greater expansion outside of their home market, as do 71% of European managers, while only 50% of North American firms expect to launch ETF products outside of their home market (see Figure 12).

Figure 12: Percent of respondents who expect to see significant launches of ETFs by firms from outside of their home market over the next two years



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.

For firms planning to expand beyond their own borders, establishing effective distribution is considered critical to success (see Figure 13). Further, understanding local regulations and tax codes is also seen as important to a successful market expansion effort. Additionally, developing and maintaining strong relationships with local capital markets is seen as important as firms seek to expand their ETF product offerings beyond their current regional markets.

Figure 13: Respondents who expect to see significant launches of ETFs by firms from outside their home market over the next two years

	North America	Europe	Asia
Effective distribution channels and infrastructure	1	1	2
Knowledge of local market regulations and taxes	5	2	1
Developing and maintaining strong relationships with local service providers	4	3	3
Establishing strong working relationships with local service providers	3	4	5
Education – both internal and external	2	5	4

Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf. Note: 1 is most important and 5 is least important.

Tax structuring

Globalisation: Necessitating an increasing list of international tax considerations

Every decision during the life cycle of an ETF, from the product development to fund launch and thereafter, could potentially impact the tax efficiency of the vehicle and/or give rise to unforeseen international tax consequences.

Decisions concerning the choice of investment strategy, fund domicile/ legal structure and distribution of the fund are all critical to optimising tax efficiency as set out below, and, when given appropriate consideration, can present an opportunity for competitive advantage in a market focused on maximising efficiency and return.

Choice of fund domicile

The choice of fund domicile will directly impact the availability, or otherwise, of treaty access – which can reduce, and in some cases eliminate-portfolio level withholding taxes and capital gains taxes. It is worth noting that the ability of ETFs, and funds in general, to access the benefits of tax treaties is not always straightforward, particularly given the limited visibility as to the investor profile of ETFs due to secondary market trading.

In addition to portfolio level withholding taxes, depending on the fund domicile, distributions from the ETF to investors may also be subject to withholding tax. This can

have a significant impact on the tax efficiency of the return to investors, particularly where the ETF is distributed cross border.

Target market/investors

In addition to considering fund domicile, ETF sponsors also need to consider the tax profile and requirements of their target investors if they are to ensure that the product is tax efficient. In order to compete and to effectively market their products across borders, ETF sponsors require a deep understanding of country-specific investor tax reporting requirements. This should be considered at the product development stage of the life cycle in order to help ensure beneficial tax treatment is afforded to investors in the ETF and that local compliance obligations are met, thus offering a potential source of competitive advantage.

Activities and presence in new markets

When entering new markets, it is important to consider the activities and physical presence that the ETF sponsor – and its affiliates – will have in the new market or territory. As sales teams/distribution staff will be on the ground, making decisions on behalf of the ETF/fund manager and negotiating contracts, there is a risk that those activities may create a tax exposure (or so called permanent establishment) for the ETF/manager in that jurisdiction.

North American roadmap: Leading the way

Overview

The North American ETF market is the primary driver of global growth, accounting for more than two thirds of global ETF assets. It also leads the way in product innovation. Strong growth is expected to continue over the next five years, but a number of things will need to happen if asset growth is to accelerate. The regulatory environment continues to play a key role in shaping the North American ETF market. The approval of periodically disclosed active models is seen as the most important development over the next five years, followed by the approval of generic listing requirements for active ETFs (see Figure 14). Other areas, such as approval of an ETF rule to codify many of the areas currently requiring exemptive relief from the Securities and Exchange Commission, levelling the playing field with respect to the use of custom baskets, and the proposed uniform fiduciary standard rules for brokers and registered investment advisors are considered less important for the growth of ETFs.

Figure 14: Regulatory changes ranked in order of their impact on the ETF business over the next five years by North American respondents



US regulation

In 2015, the SEC set an ambitious agenda to address certain risks in the mutual fund industry, including ETFs. These reforms addressed the use of derivatives and leverage by ETFs and increased disclosure of liquidity risk management efforts by open-ended funds.

Proposed US derivative rules

Under the SEC's proposed new derivative rules for mutual funds and business development companies, a fund would be required to comply with one of two alternative portfolio limitations.¹¹ These limitations are designed to cap the amount of leverage the fund may obtain through derivatives and certain other transactions. A fund would also be required to manage the risks associated with derivatives by segregating certain assets. Funds that engage in more than limited derivatives transactions or use complex derivatives would be required to establish a formalised derivatives risk management programme consisting of certain components administered by a designated derivatives risk manager. These proposed derivative rules could impact both existing and proposed ETFs, including limiting the use of derivatives by some leveraged and inverse leveraged exchange traded products.

ETFs and liquidity in the US

Given the volatility in the markets over the past few years, there has been a continued focus on liquidity, particularly in the bond markets.¹² In September 2015, the SEC proposed a series of liquidity rules that could significantly impact ETFs, including requiring them to have a liquidity risk management programme.¹³ ETFs would be

required to assess and periodically review their liquidity risk, based on specified factors. ETFs would also be required to hold more cash and high liquid assets, thus increasing performance tracking error for funds that would not be able to invest fully in the securities, comprising their respective benchmark indexes.

Department of Labor Fiduciary Standard Rule

In April 2016, the US Department of Labor (DOL) released its long-awaited fiduciary standard rule, which establishes new requirements for advice provided to retirement investors. Any advice provided to an employee benefit plan or an individual retirement account would be considered to be fiduciary advice and must be in the best interests of the investor. The fiduciary standard rule has the potential to further align the interests of financial advisors and investors by shifting away from investments in commission-based products and moving them towards lower cost, fee-based investment products such as ETFs.

Canadian regulation

In Canada, the implementation of the Client Relationship Model-Phase 2 (CRM2) is focused on increasing the transparency in the financial advice industry, including providing investors with clear, complete disclosures of all charges and compensation associated with investment products and services they receive. The increased transparency of charges and compensation is expected to shift investors towards fee-based advisors and lower cost investment products, including ETFs.

¹¹ SEC, "SEC Proposes New Derivatives Rules for Registered Funds and Business Development Companies," accessed 28 March 2016, www.sec.gov.

¹² Liquidity is generally defined as the ability to execute large transactions with limited price impact, typically associated with low transaction costs and best execution.

¹³ "SEC Proposes Liquidity Management Rules for Mutual Funds and ETFs," SEC press release 2015-2016, 22 September 2015, accessed 25 March 2016, www.sec.gov.

Virtually all North American participants in the survey agree that periodically disclosed ETFs will change the ETF landscape in a way that would have an effect on their firm's operations.

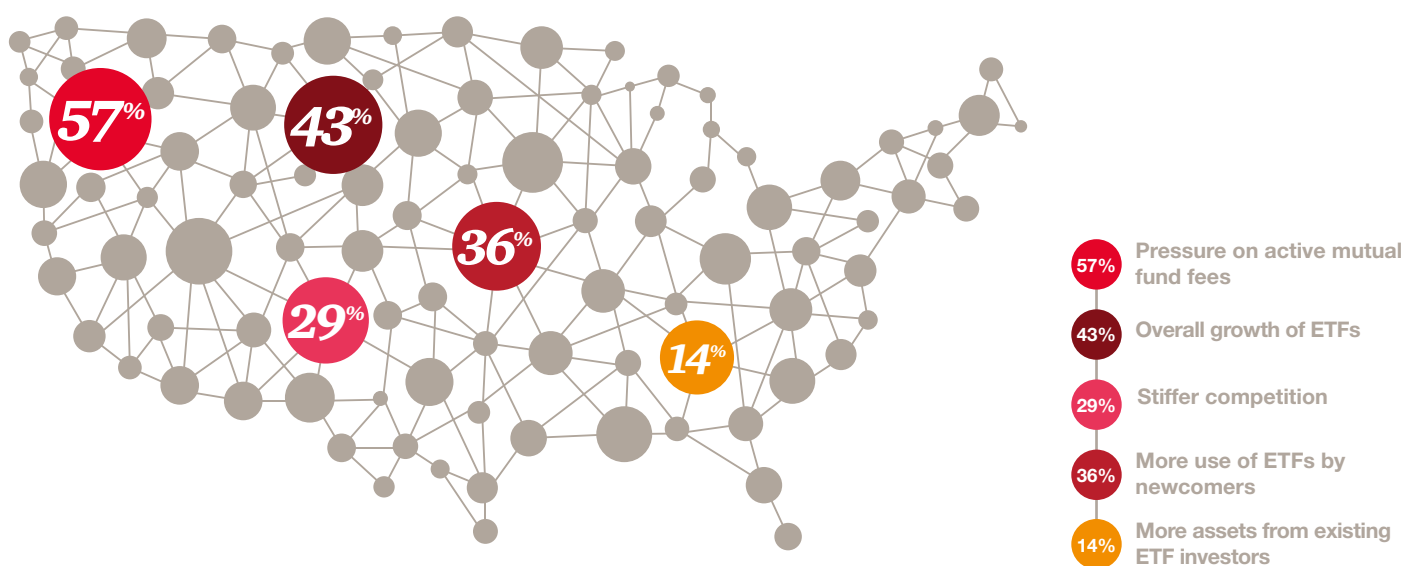
Growth of active ETFs

The US active ETF market has been slowly growing since their introduction in 2007, with most of the growth coming from active fixed-income ETFs that have less risk to potential front-running of the portfolio. This slow growth is a direct result of the SEC requirement to provide daily transparency. More than 75 firms have obtained approval from the SEC to launch transparent active ETFs, while there are only 30 active ETF issuers as of February 5, 2016.^{14,15} Half of all North American survey participants expect assets in active ETFs to grow from less than US\$20 billion to more than US\$100 billion in three years or less, while the other half expect it to take more than three years.

Approval of periodically disclosed ETFs

The introduction of periodically disclosed, actively managed ETFs will affect the industry in a variety of ways. The biggest impact, according to those in our survey, will be the downward pressure they exert on fees charged by actively managed mutual funds (see Figure 15). They are also likely to contribute to asset growth, not least of all by introducing more investors to the world of ETFs. Virtually all North American participants in the survey agree that periodically disclosed ETFs will change the ETF landscape in a way that would have an effect on their firm's operations. We may see the active and periodically disclosed active ETF markets evolving over time; however, we expect that active ETF sponsors will have to have some type of revenue-sharing programme to provide an incentive to encourage sales of active ETFs.

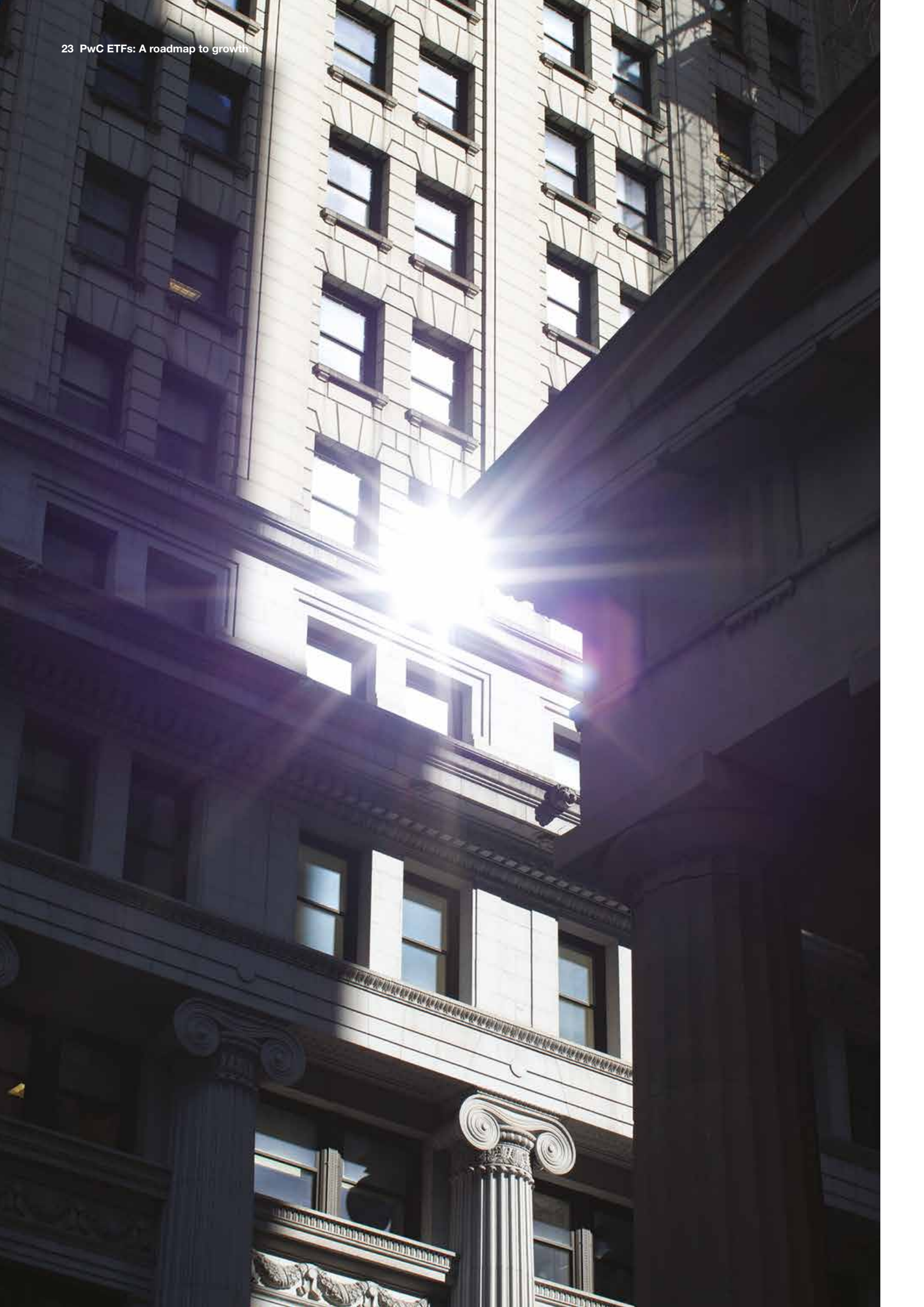
Figure 15: Percent of North American respondents that expect the introduction of periodically disclosed active ETFs to have a major impact on the following areas within asset management



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf. Note: More than one response allowed.

¹⁴ SEC, "Investment Company Act Notices and Orders Category Listing, Active Exchange Traded Funds," accessed 12 February 2016, www.sec.gov.

¹⁵ "AdvisorShares Active ETF Market Share Update – Week Ending 5 February 2016," 5 February 2016.



European roadmap: A convergence of opportunity?

Overview

The European ETF market has grown steadily and now boasts approximately US\$511 billion AUM.¹⁶ Industry participants expect asset growth to accelerate by approximately 27% annually over the next five years. Having benefited from an evolving regulatory environment and lowering barriers across individual markets, several additional factors are newly expected to drive growth over the next five years.

The expansion of robo-advice and online platforms in particular is likely to play a key role in the growing use of ETFs by European retail investors. Investor education also continues to be another important factor driving this growth (see Figure 16).

Figure 16: European respondents' ranking of the steps necessary to expand the penetration of ETFs into the retail market

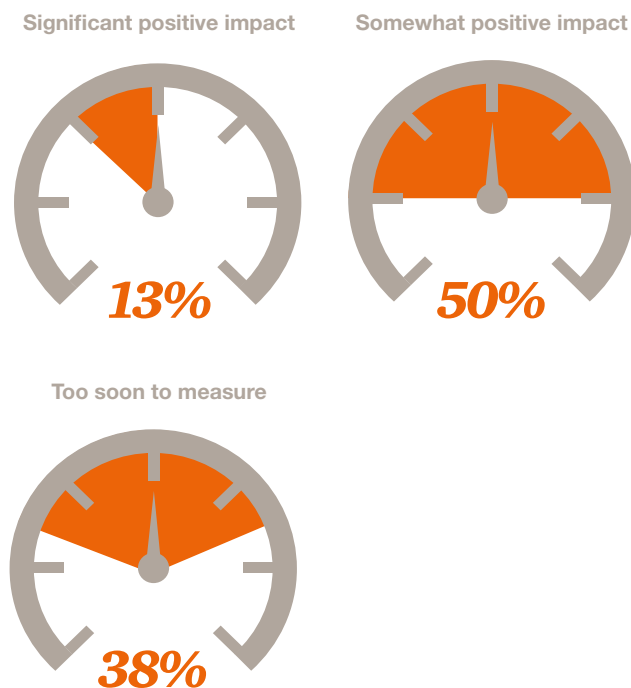


Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.

16 BlackRock, "BlackRock Global ETF Landscape: Industry Highlights," December 2015.



Figure 17: Half of European respondents reported that the retail distribution review (RDR) and the markets in financial instruments directive II (MiFID II) have had a somewhat positive impact on ETFs to date



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf.

Note: percent of European respondents who indicated the type of impact that the Retail Distribution Review (RDR) and Markets in Financial Instruments Directive II (MiFID II) had on ETFs to date. Due to rounding, the percentages may not add up to 100%.

European regulatory developments

Markets in Financial Instruments Directive II

MiFID II marks a significant step in the European Union's attempt to increase market efficiency and choice, enhance investor protection, strengthen market integrity and harmonise regulatory standards in Europe. MiFID II enhances existing requirements around investor protection and transparency and reforms existing market infrastructure. It pushes more trading onto regulated trading venues by introducing the concept of an 'Organised Trading Facility'—a broad category of trading venues that captures a range of currently unregulated electronic platforms. There will be greater requirements for pre- and post-trade transparency, curbs and controls on algorithmic and high-frequency trading and a proposed near total ban on commissions, which will be applied to an expanded range of financial instruments, firms and activities.

The proposed ban on most inducements, including commissions and rebates, for independent advisors is expected to force many in the market to rethink their business model and how their funds are distributed.

While implementation has been delayed until 3 January 2018, the effects of MiFID II on European ETFs are expected to be considerable and firms should be evaluating the impact to their products, markets, distribution and technology.

Shift toward fee-based advice

Structural changes in the way advice is delivered have helped to expand the use of ETFs in European markets. This momentum has been boosted further by regulations such as the Retail Distribution Review (RDR), which is causing distribution models to shift away from commissions. Almost two thirds of European survey participants say these particular initiatives have had a positive impact on ETFs in their market, while the other one third indicate that it is too soon to measure (see Figure 17).

The fragmented nature of European markets has a direct impact on the distribution of financial products and ETFs are no exception. Average daily volume can be surprisingly low and bid-ask spreads can be wide.

Capital Markets Union

On 30 September 2015, the European Commission (EC) published its Capital Markets Union (CMU) Action Plan, setting out the steps that will be taken to put the CMU in place by 2019.¹⁷ Accompanying its Action Plan, the EC put forward the following two steps with immediate effect:

- A regulation aimed at reviving European securitisation markets.
- Revised prudential calibrations for banks in the Capital Requirements Regulation and an adjustment to the ‘Solvency II’ legislation to make it easier for insurers to invest in infrastructure and European Long Term Investment Funds.

Some of the overarching goals of the CMU include:

- Creating a single market for capital by removing barriers to cross-border investments.
- Increasing competition to reduce the cost of raising capital.
- Diversifying the funding of the economy by matching supply to demand.
- Helping the EU to attract investments from around the world and become more competitive.

The creation of a single market for capital to facilitate cross-border investments could significantly reduce costs and open up further opportunities for European ETFs.

Centralised settlement

The fragmented nature of European markets has a direct impact on the distribution of financial products and ETFs are no exception. Average daily volume can be surprisingly low and bid-ask spreads can be wide. However, these measures can be misleading due to factors unique to the European markets, such as multiple exchange listings and multiple currency listings at each exchange.

This fragmentation is being addressed on multiple fronts. Underpinning these integration efforts is the European Central Bank’s efforts to create a centralised settlement system that would ultimately support a single European capital market. This system, known as T2S, recently went live after years of delays. However, implementation remains incomplete and some key players have said their participation will be further delayed to some undetermined time in the future.¹⁸ Notable among these is Euroclear, a central securities depository (CSD) based in Belgium, which ranks among the world’s largest. Euroclear now provides a simpler, more efficient and centralised settlement system compared to the current one, but its delayed migration to T2S is emblematic of the expensive and prolonged struggle to effectively integrate European markets. It should come as no surprise that while the majority of survey participants expect centralised settlement to have a positive effect on European ETFs, a significant minority (44%) say it is too soon to tell (see Figure 18).

¹⁷ PwC, “Capital Markets Union: Integration of Capital Markets in the European Union,” September 2015, www.pwc.com.

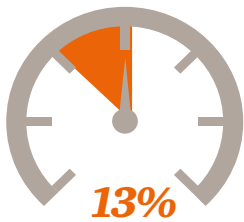
¹⁸ Phillip Stafford, “Euroclear delays entry to European Central Bank T2S project,” The Financial Times Ltd., 30 October 2015, accessed 8 March 2016.

More locally developed, listed and marketed funds

Increased localisation is likely to have a positive effect on fund flows. More than nine out of ten European respondents say locally listed ETFs are preferable. The current regulations governing cross-border distribution aim at harmonising and simplifying the registration process. However, some significant national differences remain. It is important to have a fully coordinated approach when dealing with several countries simultaneously.

Figure 18: The majority of European respondents expect centralised settlement to have a significant or somewhat positive impact on European ETFs

Significant positive impact



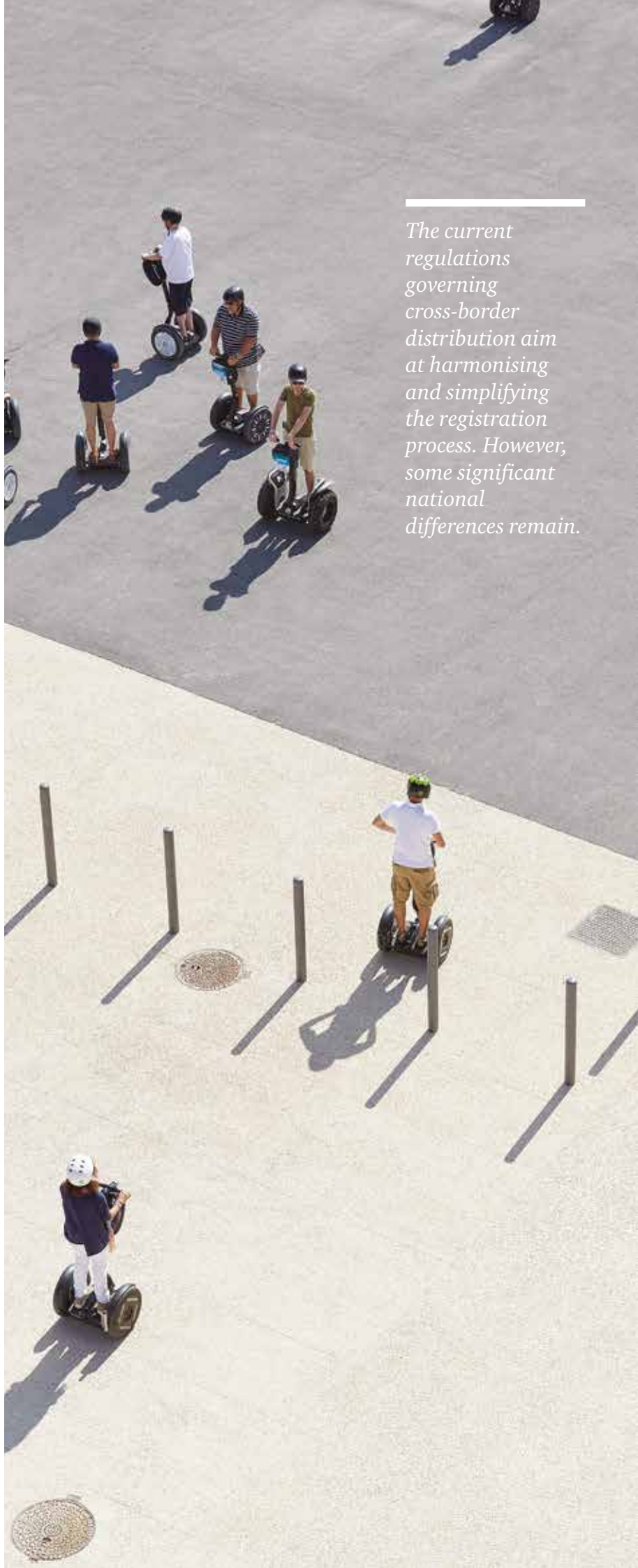
Too soon to measure



Somewhat positive impact



Source: PwC, "2nd Annual Global ETF Survey," 2015, www.pwc.com/us/etf. Note: Due to rounding, the percentages may not add up to 100%.



The current regulations governing cross-border distribution aim at harmonising and simplifying the registration process. However, some significant national differences remain.

Asian roadmap: Pure potential

Overview

Approximately US\$243 billion is currently invested in ETFs in the Asia-Pacific region, which is about half the size of the European ETF market.¹⁹ Asset growth stalled in 2015 as China's economy faltered and the volatility of its stock markets significantly increased, but cross-border barriers are coming down in much of the region, which should provide for more rapid growth going forward across investor segments.

On 22 May 2015, the China Securities Regulatory Commission and Hong Kong Securities and Futures Commission (SFC) signed a memorandum of regulatory cooperation on mainland Hong Kong Mutual Recognition of Funds (MRF), which sets out key principles and operational requirements of the MRF scheme and is expected to facilitate more trading and integration of the Asia asset management industry.²⁰ The MRF scheme was implemented on 1 July 2015.²¹ Only Hong Kong domiciled funds managed by a SFC-licensed manager will be able to distribute their funds into China and vice versa. Initially, only general equity funds, mixed funds, bond funds, physical index-tracking ETFs and unlisted index funds are eligible for participation in the MRF scheme.

Meanwhile, growth is accelerating in Japan, thanks in part to the Bank of Japan's (BOJ) use of ETFs in its stimulus programme. The BOJ now reportedly owns more than 50% of the Japanese ETF market.²²

Product innovation continues to lag behind North America and Europe, with more than 90% of Asia ETF AUM in only equity ETFs as of December 2015.²³ However, in early February 2016, Hong Kong's SFC issued a circular outlining provisions in which leveraged and inverse ETFs would be permitted.²⁴ Commission-dependent distribution channels and slowing economic growth could prove to be substantial hurdles, but several factors are likely to propel regional asset growth.

¹⁹ BlackRock, "BlackRock Global ETF Landscape: Industry Highlights," December 2015.

²⁰ Securities and Futures Commission, "Joint Announcement of China Securities Regulatory Commission and Securities and Futures Commission," 22 May 2015.

²¹ Ibid.

²² Yuji Nakamura and Nao Sano, "Owning Half of Japan's ETF Market Might Not Be Enough for Kuroda," Bloomberg, 28 October 2015, accessed 14 March 2016, www.bloomberg.com.

²³ BlackRock, "BlackRock Global ETF Landscape: Industry Highlights," December 2015.

²⁴ Securities and Futures Commission, "Circular on Leveraged and Inverse Products," 6 February 2016.





Growth drivers

More integrated markets

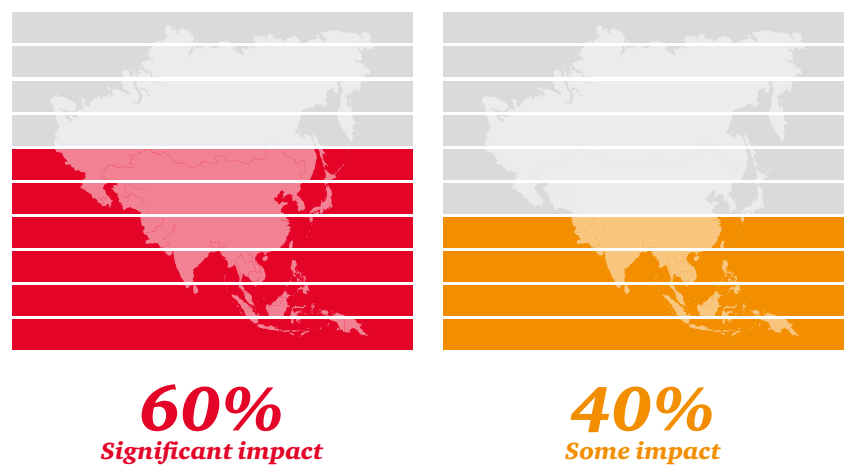
Recently enacted stock connect and fund passport programmes are generally expected to have a galvanising effect on Asian ETF asset flows. Six out of ten Asian respondents said they expect such programmes to have a significant impact on asset growth (see Figure 19).

Hong Kong is seeking to establish itself as a regional centre of growth for ETFs in Asia. It has formed a working group under the Financial Services Development Council – to highlight key benefits of Hong Kong serving as a regional centre for Asia ETF growth, including its stock connect programme with China, and its financial infrastructure and talent. Proposed solutions outlined in the Council’s paper, titled “Strengthening Hong Kong as a Capital Formation Centre for Exchange Traded Funds”, to expand the Hong Kong ETF market include, among others:

- Improving investor education about ETFs.
- Promoting use of ETFs in retirement plans.
- Further developing Mutual Recognition and the Shanghai–Hong Kong Stock Connect Programme for ETFs.
- Enhancing communications between the SFC and ETF industry.
- Improving ETF distribution channels.²⁵

In addition, the SFC has adopted a streamlined authorisation process for new fund applications, including ETFs. The revamped process aims to reduce the average approval time from the application acceptance date, thereby reducing the ‘time to market’ of funds for public offering, enabling investors to capitalise on new investment opportunities and to enhance the competitiveness of Hong Kong as a fund management centre in the region.

Figure 19: The majority of Asian respondents expect stock connect programmes and fund passport schemes to have a significant impact on the growth of Asian ETFs



Source: PwC, “2nd Annual Global ETF Survey,” 2015, www.pwc.com/us/etf.

²⁵ H.K. Financial Services Development Council, “Strengthening Hong Kong as a Capital Formation Centre for Exchange Traded Funds,” 27 October 2015, www.fsdcc.org.hk, accessed 14 March 2016.

In order to encourage institutional investors to report over-the-counter ETF transactions to the exchange for greater transparency, SGX also announced in January 2015 a longer-term initiative to waive clearing fees for ETF block trades between 2 February 2015 to 31 December 2017.

South Korea and Taiwan also signed a memorandum of understanding in December 2015 to jointly develop ETFs, compile indices and promote cross-border activities between the two markets. However, these exchanges are not currently seeking to facilitate a cross-listing arrangement.

In Taiwan, new initiatives are being developed where feasibility studies and risk analyses of leveraged and inverse futures ETFs are under way, along with the formulation of the accompanying regulatory amendments, so that these products can be made available for local fund managers to launch in the future and diversify their product offerings. Meanwhile, in line with the government's policy to promote financial technology innovation as customer-centred financial technology, the Financial Supervisory Commission (FSC) approved the establishment of Fund Rich Securities Co. Ltd., a joint venture between the Taiwan Depository & Clearing Corporation (TDCC) and Taipei Exchange (TPEX), in November 2015. Fund Rich Securities Co. Ltd offers a brand new online platform for trading mutual funds. This online mutual fund platform is expected to drive further mutual funds growth in the Taiwan market.

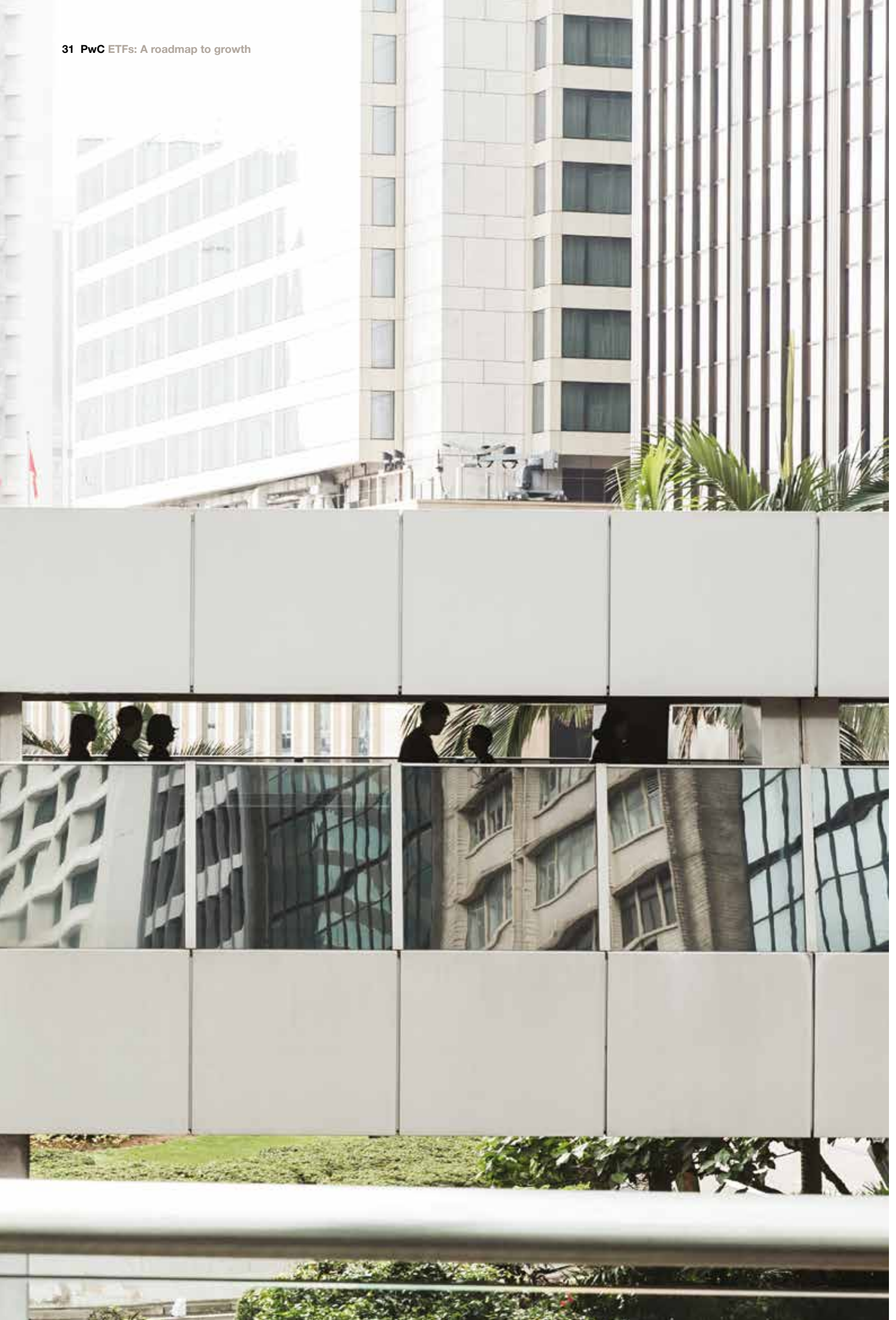
As part of the promotion of ETFs as investment products, the Singapore Exchange (SGX) waived ETF clearing fees for both institutional and retail investors for a promotional period of 1 June 2015 to 31 December 2015. In order to encourage institutional investors to report over-the-counter ETF transactions to the exchange for greater transparency, SGX also announced in January 2015 a longer-term initiative to waive clearing fees for ETF block trades between 2 February 2015 to 31 December 2017. This would help institutional investors minimise the cost of reporting while reducing their counterparty risks. Additionally, the SGX is implementing several new initiatives to boost investors' understanding of ETFs, starting with the launch of a new SGX ETF investor guide and complementary ETF seminars organised on a monthly basis through the SGX Academy.

Investor education and growing familiarity

Investors need to understand how to use ETFs as well as the benefits of ETF investing, which include low cost, transparency and the ability to trade intra-day. Increased familiarity and comfort with ETFs mean investors are now more likely to view locally listed funds favourably. Nevertheless, 44% of Asian respondents to the PwC 2015 ETF survey said US listings were viewed favourably (viewed more favourably by investors in their region) by investors in their region (see Figure 20).

Figure 20: Over half of Asian respondents report that Asian ETF listing is favourable to US ETF listing





Conclusion

The market for ETFs is likely to grow at a healthy rate over the coming years. New firms are expected to enter the ETF space, either organically or through acquisitions. More investor segments are likely to continue to find new and different ways to use ETFs as part of their investment strategy, which will help to possibly drive global ETF assets above US\$7 trillion by 2021.

Over the next five years, we expect that there will be increasing competition in ETF markets across the globe and firms will likely need to continue to seek ways to differentiate themselves in these crowded markets. Continued focus on investor education, adapting product offerings to evolving regulations, navigating complex global markets, and establishing strong distribution partners will be some of the keys to success.

Further advances in the use of big data, digital technology and social media will help to improve decision-making processes, provide opportunities for ETF sponsors to streamline costs, and transform client relationships in terms of communications, sales and distribution.

We hope that our perspectives, as well as those shared by survey participants, have provided you with some insights as you consider your firm's ETF strategies currently as well as over the next five years and beyond. We welcome the opportunity to discuss the contents of this paper with you.

Appendix: Global ETF Growth Model methodology

Overview

In our Global ETF Growth Model, we project asset levels over the next five years and analyse how various factors might affect growth trajectories.²⁶

Underlying growth assumptions are based on monthly historical flow data and average market appreciation, which serve as the foundation for three growth scenarios:

- Baseline scenario: Net flows (US\$) + Market action (5%).
- Moderate growth scenario: Net flows (US\$) + Market action (5%) + Accelerants (6.5%).
- High growth scenario: Net flows (US\$) + Market action (5%) + Accelerants (12%).

Historical data

- Historical monthly asset and net flow data was obtained from Strategic Insight for 2010 to 2015.
- European data includes cross-border funds, mostly domiciled in places like Ireland and Luxembourg.

Accelerants

Accelerants are unique to each region and are generally assumed to produce higher levels of net new flows. The model accommodates some factors, such as regulatory hurdles, that may produce the opposite effect and act as a drag on growth. Only primary markets (US, Europe and Asia) are subject to accelerants. Each accelerant is defined as the percent of annual incremental increase in net new flows that it is projected to be produced within a given region. Specific accelerants include:

US	Europe	Asia
Retirement market penetration	Shift to fee-based advice	More integrated markets
Robo-advisors and ETF strategists	Robo-advisors and ETF strategists	Robo-advisors and ETF strategists
Growth of active ETFs	Growing institutional use	Investor education and familiarity
Investor education and familiarity	Investor education and familiarity	Regulatory hurdles
Regulatory hurdles	Regulatory hurdles	

²⁶ PwC analysis based on data from Strategic Insight: Global ETF Flow Watch for 2010 through 2015.

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