
Asset & Wealth Management Revolution: Embracing Exponential Change

Report







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Executive Summary

Change in the asset and wealth management industry (the ‘AWM industry’) is now accelerating at an exponential rate. Although the industry is set for growth over the next ten years, asset and wealth managers must become business revolutionaries, even disruptors, if they’re to survive and prosper. Now is the time for action.

- Asset and wealth management has been in a period of upheaval globally since the 2008-2009 Global Financial Crisis (GFC) that’s intensifying. The modern-day industry has remained fundamentally the same since the last decade of the 20th Century; over the next ten years it will be substantially reinvented. There will be major changes to fees, products, distribution, regulation, technology and people skills.
- Assets under management (AuM) will continue to grow rapidly. We¹ estimate that by 2025 AuM will have almost doubled – rising from US\$84.9 trillion in 2016 to US\$145.4 trillion in 2025.² This growth will likely be uneven in consistency and timing: slowest in percentage terms in developed markets and fastest in developing markets. But there are risks. Rising populism in Europe, Brexit negotiations, China’s transition to a consumer-driven economy, Asian geopolitics and the potential changes in US policies on regulation, tax and trade all create uncertainty.

- Four interconnected trends will drive the AWM industry’s revolution. Between them, they will squeeze industry margins, making scale and operational efficiency far more important, and meaning that all firms need to integrate technology in all areas of the business and develop a clear strategy for the future.
- 1. Buyers’ market.** Fees are being pushed down by investors and regulators. Increased regulation, competition and new entrants are disrupting traditional value chains and revolutionising wealth managers’ raison d’être. Regulations are being introduced worldwide to prevent asset managers from paying commissions to incentivise distributors, leading to lower cost retail products. Meanwhile, institutional investors have the tools to differentiate alpha and beta – they will pay more for alpha but not for beta. As low-cost products gain market share, and larger players benefit from scale economies, there will be further industry consolidation and new forms of collaboration. Asset and wealth managers must be ‘fit for growth’ or they can expect either to fail or to become acquisition targets. They must act now.
 - 2. Digital technologies: do or die.** The AWM industry is a digital technology laggard. Technology advances will drive quantum change across the value chain – including new client acquisition, customisation of investment advice, research and portfolio management, middle and back office processes, distribution and client engagement. How well firms embrace technology will help to determine which prosper in the years ahead. Technology

¹ All views in this document are based on PwC opinions, supported by third-party verified information.

² PwC AWM Research Centre.

giants will enter the sector, flexing their data analytics and distribution muscle. The race is on ...

3. **Funding the future.** Asset and wealth managers have been filling the financing gaps that have emerged since the GFC. They have been first movers, providing capital in areas short of funding due to banks' regulatory and capital limitations, as well as investing in real asset classes. To generate alpha, their involvement in niche areas such as trade finance, peer-to-peer lending and infrastructure will dramatically increase. Equipping individuals to save for old age, as governments step back, will also support growth in AuM. Action is needed to capitalise on the gaps.
4. **Outcomes matter.** Investors have spoken loudly. They want solutions for specific needs – not products that fit style boxes. Active, passive and alternative strategies have become building blocks for multi-asset, outcome-driven solutions (which will increasingly include environmental, social and governance outcomes). Demand for passive and alternative strategies will grow quickly. While active management will continue to play an important role, its growth over the near term will be slower than passive. Firms must either have the scale to create multi-asset solutions

or be content as suppliers of building blocks. Managers must deeply understand their investors' needs, tailor solutions and focus on optimising distribution channels. They must also focus on their core differentiating capabilities and move to outsource non-core functions, such as tax compliance. Investors have great choice; they will move to optimal solutions regardless of prior loyalties.

- These four trends will transform the industry's nature and structure. Scale, price, diverse people and technology capabilities will characterise the largest firms. Smaller, specialist firms will prosper if they offer excellent investment performance and service. The industry must act in three areas:

Strategy

Firms should reorganise the business structure to support their differentiating capabilities and to cut costs elsewhere.

Technology

Every firm must embrace technology as it impacts all functions.

People

Different skills are needed, backed by new employment models. Firms must find and develop people with new skills and adapt their employment models to nurture and retain them.

Asset Management 2020: back to the future

These transforming trends have evolved from the six game changers we identified in our Asset Management 2020 paper, published in 2014:

1. Asset management moves centre stage
2. Distribution is redrawn – regional and global platforms dominate
3. Fee models are transformed
4. Alternatives become more mainstream, passives are core and ETFs proliferate
5. New breed of global managers
6. Asset management enters the 21st Century.

Looking forward to 2020, the paper successfully forecast the rapid growth in industry assets under management. It also predicted the shift from active management to passive, the rise of ETFs and continued expansion in alternative asset management. Notably, it also anticipated that regulations such as the Retail Distribution Regime (RDR) introduced in the UK in 2012 would be mirrored by regulators in other geographies, with a significant impact on asset management and wealth management revenue models. Since 2014, these changes have accelerated and evolved. They're in the process of revolutionising the sector.



Landscape

Set for rapid, if uneven, growth

The burgeoning wealth of high-net worth individuals and the mass affluent, as well as a pronounced shift to defined contribution retirement saving, are propelling huge growth in the industry. By 2025, we anticipate that AuM will almost double in size.

If interest rates remain relatively low globally and economic growth is sustained, our projections foresee AuM growing from US\$84.9 trillion in 2016 to US\$111.2 trillion by 2020, and then again to US\$145.4 trillion by 2025 (see figure 1). Retail (mutual) funds (including ETFs) will almost double assets by 2025 and institutional mandates will expand similarly. What's more, we think alternative asset classes – in particular, real assets, private equity and private debt – will more than double in size, as investors diversify to reduce volatility and achieve specific outcomes.³

Personal wealth is accumulating fast, mainly in developing countries, and individual retirement and pension funds are expanding. The industry is set to manage a greater share of this wealth. If current growth is sustained, the industry's penetration rate (managed assets, as a proportion of total assets) will expand from 39.6% in 2016 to 42.1% by 2025.³ Growing individual

investor wealth, and comfort with entrusting financial assets to professional managers, will counterbalance a move by the largest pension funds and sovereign wealth funds (SWFs) to manage more assets internally.

But growth has challenges. Geopolitics, normalisation of interest rates, Brexit, China's transition to a consumer-driven economy and the potential changes in US policies on regulation, tax and trade all create uncertainty. Should things play out badly, there could be consequences for financial markets, especially fully valued bond markets, and US equity markets which are currently at a 15-year high on cyclically adjusted price-earnings ratios. Our most conservative scenario still projects growth although substantially slower, resulting in AuM of US\$93.4 trillion by 2020 and US\$107.8 trillion by 2025.³

Highest growth rates in Asia, Latin America

Growth will be uneven; on a percentage basis, it's slowest in developed markets and fastest in developing markets (see figure 2). Even so, we anticipate assets growing at 5.7% a year in North America from 2016 to 2020, slowing to 4.0% from 2020 to 2025, lifting assets from US\$46.9 trillion to US\$71.2 trillion over the nine years. Similarly, Europe is projected to grow at 8.4% and 3.4% respectively over the two periods, with assets rising from US\$21.9 trillion to US\$35.7 trillion.³

³ PwC AWM Research Centre.

Figure 1: Total client assets in USD trillion

Clients	2004	2007	2012	2016	2020e	2025e	CAGR 2016-2025e
Pension funds	21.3	29.4	33.9	38.3	53.1	64.6	6.0%
Insurance companies	17.7	21.2	24.1	29.4	38.4	44.7	4.8%
Sovereign wealth funds (SWF)	1.9	3.3	5.2	7.4	10.0	13.6	7.0%
HNWI	37.9	50.1	52.4	72.3	93.4	119.9	5.8%
Mass affluent	42.1	55.8	59.5	67.2	84.4	102.2	4.8%
Total client assets	120.9	159.7	175.1	214.6	279.3	345.0	5.4%
Global AuM	37.3	59.4	63.9	84.9	111.2	145.4	6.2%
Penetration rate	30.9%	37.2%	36.5%	39.6%	39.8%	42.1%	0.7%

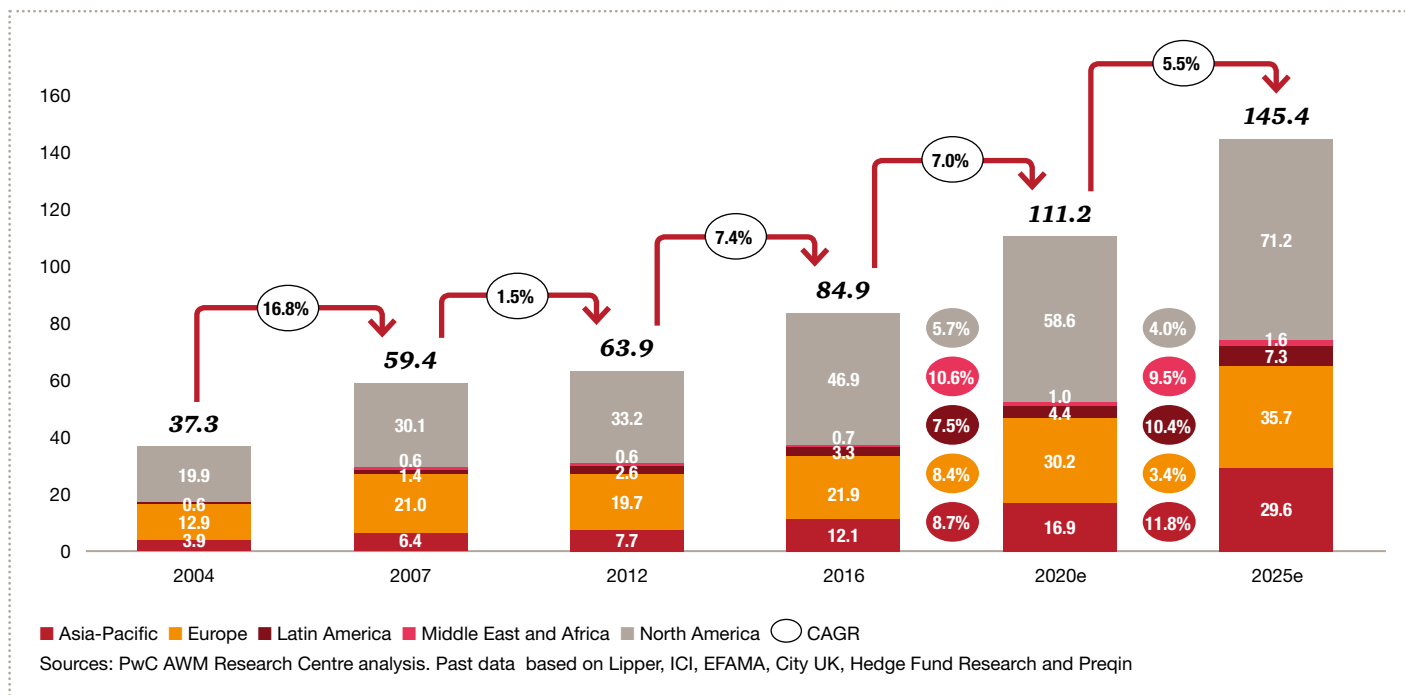
Sources: PwC AWM Research Centre analysis. Past data based on Lipper, ICI, Preqin, Hedge Fund Research, EFAMA, City UK, Insurance Europe, Financial Stability Board, Credit Suisse, Towers Watson, OECD and World Bank.

Note: Foundations and Endowments assets were not included as their total global assets represent less than 1% of all client assets.

Developing Asia-Pacific's dynamism is set to spur growth of 8.7% a year from 2016 to 2020, accelerating to 11.8% from 2020 to 2025. This will lift regional assets from US\$12.1 trillion to US\$29.6 trillion. Latin America is likely to grow at similarly rapid rates of 7.5% in the former period, accelerating to 10.4% in the latter. From a low

base of US\$3.3 trillion, the region's assets are projected to increase to US\$7.3 trillion.⁴ The continued introduction of individual retirement accounts and defined contribution pension plans across the globe is democratising investing, opening people's eyes to its possibilities.

Figure 2: Global AuM by region in USD trillion Base scenario



Pressures intensify from all angles

Even as continued growth in asset prices (especially equity index levels) serves as a tailwind, asset and wealth managers are under margin pressure, and regulators are zeroing in on the industry's competitive profile. Just as regulation and transparency requirements add to costs, so pricing power is being squeezed across the board. This is happening at a time when firms must invest in building outcome-based solutions, applying new technologies and investing in more diverse people and related skills (see people in a time of technology, page 19). Already, this is leading to mergers as managers scramble for scale.

Profit margins are falling globally. We estimate that they have declined by approximately 10% since the GFC due to the pressures exerted by passive players on pricing and flows, rising regulation and technology costs, and this will continue.

The heydays of 30%+ profit margins will not be sustainable in the new world order. As one of the largest asset and wealth management centres, the UK is reasonably representative of the global industry. A recent study by the UK's Financial Conduct Authority estimated that UK profit margins averaged 34-39% from 2010 to 2015.

Although the study covered only a small sample of firms, it shows that margins remain higher than in other industries.⁵ The average reported in the UK masks a broad spectrum. In fact, we estimate that margins vary globally from as little as 5% for a small retail asset manager up to 60% for some of the world's largest institutional managers.



⁵ Financial Conduct Authority; Asset Management Market Study; Profitability Analysis; November 2016.

This pressure on profitability is increasing at a time when firms need to invest in new talent, developing the products and technologies they will want as the industry moves towards a new paradigm.

In Europe, the MiFID II directive, to be implemented in 2018, will push up asset managers' costs and ban wealth managers' retrocessions. Most managers are now committing to absorbing research costs, historically borne by investors. This will have a knock-on impact on the research providers in investment banks.

In the US, the new administration has committed to grant some relief to the new regulations that have proliferated since the GFC, but this remains a work in progress. The Department of Labor (DOL) Fiduciary Rule is under attack and likely to change with the Securities and Exchange Commission becoming more engaged in developing a uniform fiduciary standard. Whatever the final approach, the US is heading towards ensuring that high commissions do not influence advice, carrying on the initiative started by the UK Retail Distribution Review (RDR) in 2012. Most major asset managers and distributors have already made changes to their product shelves, pricing, revenue-sharing arrangements, advisor compensation and disclosure policies.

In developing Asia-Pacific, by contrast, regulation is priming new opportunities. Pan-Asian fund passports are slowly being introduced, although delayed by national interests, aiming to foster the regional industry.

When combined with a shift to outcome-based solutions and the expanding market share of passive strategies, this is relentlessly driving down the overall revenue pool. Passive strategies form the foundation of outcome-based investing, with active management (whether traditional or alternative) acting as an important component.

To gain scale, several international asset managers have merged. Some asset managers, mainly in Europe, have been acquiring wealth managers as they seek to control distribution. This also helps to protect margins as distribution fees appear more resilient to the factors described above, but may not be a long-term solution as regulation increasingly focuses on open-architecture distribution and pushes wealth managers towards greater disclosure and a fiduciary standard of care.

As if these pressures were not enough, Brexit is causing further uncertainty. Brexit appears to be manageable for asset managers and wealth managers with sufficient 'substance' in Europe, although the European Securities and Markets Authority's recent focus on preventing regulatory arbitrage may challenge their assumptions about substance and outsourcing to third countries. Depending on where the Brexit negotiations lead, there could be significant disruption to the current European industry (and beyond). There is uncertainty around access to clients, the future model for delegation of asset management from EU funds to UK-based asset managers (and vice versa), the continued equivalence or possible divergence of regulation post Brexit, and attraction and retention of key talent into the right locations.

In summary, firms are facing uncertainty and a margin squeeze at a time when they need to invest in developing new products, new technology and new skills to compete in a new age. Analysts have commented publicly on the need for investment, despite revenue pressures. Firms will succeed if they focus on being "fit for growth" in terms of investing in their areas of strength while cutting costs elsewhere.

Transparency becomes absolute

Investors and regulators are asking for complete disclosure of costs and fees. They're also increasingly differentiating alpha and beta. What's more, offshore jurisdictions worldwide have signed up to tax disclosure agreements.

A new era of full transparency is still evolving. Regulators are forcing the pace on fees and costs. In Europe, for example, MiFID II not only bans asset managers from paying opaque retrocession commissions to wealth managers, but also requires them to disclose research costs, which will lead to further pressure on profitability. In the US, the pressure on disclosures from regulations such as the DOL Fiduciary Rule is being reinforced by actions taken by some leading firms to increase disclosures and voluntarily make statements more self-explanatory.

Investors, too, are seeking clarity as inexpensive forms of beta become easier to access. Greater transparency is revealing where asset managers add value, allowing institutional investors to more aggressively negotiate down fees for specific outcomes and retail investors to benefit from fee competition. What's more, millennial generation investors not only distrust opacity but also prefer transparent ETFs.

Turning to tax, over 50 countries have signed up to the Common Reporting Standard (CRS), agreeing to share information on residents' assets and incomes automatically. CRS, which is being introduced from 2016 to 2018, effectively outsources responsibility for reporting on tax affairs to financial institutions. With the spotlight firmly on them, and threats of a blacklist by governments and international organisations, many offshore financial centres have joined.





Four transforming trends

Four trends that will incessantly revolutionise asset and wealth management

How can firms adapt to the changing landscape? We believe that they must understand, analyse and act on four powerful trends, all of them interlinked, which are likely to revolutionise the sector from within.

These four transforming trends are:

- 1 | **Buyers' market**
- 2 | **Digital technologies: do or die**
- 3 | **Funding the future**
- 4 | **Outcomes matter**

It's difficult to predict how quickly these trends will play out. But they've been under way for some time and are accelerating. The difference is that firms must act now to fully understand them and adapt their business strategies accordingly.

Against a background of uneven growth:

Assets under management are set to grow from US\$84.9 trillion in 2016 to US\$145.4 trillion by 2025.

Change in asset and wealth management is accelerating. Although the industry looks set for rapid growth over the next ten years, asset and wealth managers must become business revolutionaries, even disruptors, if they're to increase profits and prosper.

Now is the time for action.

Four trends will revolutionise the industry:

Buyers' market

Fees are being pushed down by investors and regulators. Increased regulation, competition and new entrants are disrupting value chains. As low-cost products gain market share, and larger players benefit from scale economies, there will be further consolidation and new forms of collaboration.

1

2

Digital technologies: do or die

The industry is a digital technology laggard. How well firms embrace technology will help to determine which prosper in the years ahead. The race is on ...

Funding the future

Asset and wealth managers have been filling the financing gaps resulting from the GFC. Their involvement in niches such as trade finance, peer-to-peer lending and infrastructure will dramatically increase. Helping individuals to save for old age, as governments step back, will also support growth.

3

4

Outcomes matter

Active, passive and alternative strategies have become building blocks for multi-asset, outcome-driven solutions. Firms must either have the scale to create multi-asset solutions or be content as suppliers of building blocks.

Since the 2008-2009 Global Financial Crisis, the forces of regulation, technology and fierce competition have begun to usher in transformational change. This period of reinvention will accelerate rapidly in the years ahead, forcing the industry to re-imagine itself. In five to ten years, fewer firms will manage far more assets significantly more cheaply. Technology will be vital across the business. And, the industry will have found some new opportunities to create alpha, and restore margins.

It's time to act.

Buyers' market

Regulation and knowledge are empowering investors. Regulation is pushing retail investors towards lower-cost products. Meanwhile, as the market place unbundles alpha and beta, institutional investors are happy to pay for alpha but beta is being commoditised.

The shift of power to investors is accelerating, pushing down pricing for asset managers and wealth managers alike. The trend among regulators worldwide either to ban or to regulate commissions for advice is still playing out. In the next five years, it will significantly reduce the level of retail fees and put pressure on revenues.

Meanwhile, technology, data and analytics are revealing everything, including if value is truly added. Investors are pressing home their advantage to gain cheaper and more innovative solutions, to deliver outcomes that match their needs more precisely as they seek to increase returns.

This shift in the balance of power will lead to many more innovative outcome-based solutions for investors, often with passive products such as ETFs at their core (see 'outcomes matter', page 22).

So great is this seismic shift that industry revenues appear set to fall despite rising AuM. To protect profitability asset and wealth managers need to act now.

Retail fees fall

Regulations being introduced worldwide to prevent asset managers from paying commissions to incentivise distributors are altering industry economics. While the exact form of regulations differs from one country to another, they're promoting a shift to lower-cost fund products and reducing asset and wealth managers' revenues.

The UK's Retail Distribution Review (RDR) started the trend, banning commissions for advice in 2012. This trend is playing a major part in the anticipated pressure on industry revenues. PwC Strategy& analysis showed UK passive fund sales more than doubling in the years following RDR and the number of financial advisers falling by almost a quarter. Using the same analysis, we estimate that asset and wealth managers' fee levels will typically fall by 15 to 20% in countries introducing this type of regulation.

Countries such as Australia, South Africa and the Netherlands have introduced similar measures. Most recently, the European Union's MiFID II directive has followed suit. In the US, the DOL's Fiduciary Rule has already led to significant rationalisation of funds on broker-dealer platforms, changes to pricing and advisor compensation. The first set of requirements under this regulation was introduced on 9 June 2017 even as the DOL engaged in a broader review of the rule.⁶

⁶ At the time of writing, the application of the most contentious elements has been delayed until July 1, 2019.

Looking to Asia, there are moves afoot in India where the Securities and Exchange Board of India is trying to drive mutual fund expense ratios down. The Financial Services Agency of Japan has also released a draft of principles concerning the operation of fiduciary duty. Elsewhere in the region, there is pressure from investors for greater transparency into fees and costs.

Globally, this regulatory trend towards fee transparency will hasten the shift to passive investments. As requirements for asset and wealth managers to demonstrate their focus on clients' best interests increase, they're increasingly recommending lower-cost passive ETFs. What's more, US distributors are rationalising the number of mutual funds on their platforms by 20 to 30%. In time, this regulatory trend will lead to significant fund consolidation worldwide.

Asset and wealth managers, too, will face broad and substantial revenue pressures due to the banning of commissions and greater competition. The biggest asset and wealth managers catering to the mass affluent are already launching price wars. This will drive far greater specialisation as managers differentiate themselves by offering focused active products targeting higher returns, albeit with higher risk, over a longer time horizon at higher prices. By contrast, passive products provide a market rate of return but do so at a low fee.

Institutions dissect alpha and beta

Turning to institutional asset management, in what's expected to be a lower-return world, many investors have a razor-sharp focus on what they pay for alpha and beta. The proliferation of indexes and evolution of smart beta investing has given institutional investors the tools to customise portfolios to their needs, all for a lower price.

Fees in unconstrained asset classes such as large capitalisation equities have fallen significantly since 2000 and are likely to fall further. Fees in asset classes where liquidity and size is constrained, and where there are more alpha opportunities, are likely to remain resilient. Such asset classes include convertible bonds, emerging markets, infrastructure, private debt, private equity, credit and real estate.

Even hedge fund fees are in flux. Several years of inconsistent average performance led to more funds closing than opening in 2016. Management and incentive fees have fallen, and the management fee has started to vary according to strategy. There have also been structural changes, with previously one-off negotiated terms now more broadly offered; these include lower fees for early, loyal or large investors. New models are being introduced to realign the interests of investors and managers, amid changing performance expectations.

Factor-based investing is providing the tools to replicate cheap beta, meaning that passive investing will make further inroads into active management, including hedge funds. Yet, there are alternative strategies where unique skill, knowledge and infrastructure does create alpha. Investors value this and are willing to pay for it.

Some of the largest pension funds, SWFs and endowments are 'in-sourcing' some investment strategies. They're taking core active strategies in house to reduce costs, with some SWFs even managing real assets such as infrastructure. But in-sourcing brings its own challenges and inconsistent results, as shown by recent examples of closing in-sourced investment departments.

Millennials shun traditional wealth management

The millennial generation is wary of wealth managers and it will determine the future. Millennial preferences around convenience (e.g. mobile apps), investment models (e.g. passive and non-traditional investments) and general scepticism about traditional finance will drive change (see taxes sidebar). Even the term 'wealth management' may need to be reimagined as millennials reinvent the future to fit their lifestyles, social consciences and goals.

This generation will increasingly turn to automated wealth management solutions. Automated asset allocation – the power behind robo advisers – is already reducing the need for human advice and increasing the use of passive funds for asset allocation. Technology is also enabling outcome-based planning. It can quickly identify important life goals and solutions to match. Finally, technology can automate the processes of wealth management. For example, new client ‘on boarding’ has typically involved 20 to 30 steps but only takes two to three with some online solutions.

Yet PwC research suggests that while automation and digitisation will greatly improve service, relationship managers will always play a part. When it comes to life’s big financial planning decisions, people want empathy that machines can’t provide. The ability of clients to pay different amounts for advice and service will lead to greater segmentation by wealth managers. Without significant scale, wealth managers will need to judge which segments they can succeed in and exit those where they cannot.

Designing strategy around the investor

Asset and wealth managers need a laser-like focus on their strategy, their path to growth and their differentiating capabilities in the eyes of the investors. To really differentiate themselves, managers have to ensure that their investors truly value what they have to offer. The investor must always come first.

Just as the new generation prefers technology-enabled wealth managers to their more traditional predecessors, so technology will lead to more product innovation, lower cost products and greater scale. For example, technology might enable client advisors to serve ten times as many clients.

The shift in the balance of power to investors is likely to lead to further consolidation. Many mid-sized asset managers and wealth managers will seek to significantly reduce costs or merge to maintain profitability.

Taxes – a trust issue

In an era of mistrust of financial services, especially among the millennial generation, tax will become important for the brand. Being viewed as not paying a fair share of tax or using questionable tax havens will be unacceptable.

In short, tax systems around the globe are broken. As tax information becomes publicly available, and strong populist sentiment continues, so the public will judge whether companies are paying their ‘fair share’ of taxes in an emotionally charged environment.

In the years ahead, tax will become an important operational business risk, just as valuation and regulatory reporting are naturally viewed as operational risks. As such, the tax function will play a more important role in the heart of the business.

Tax technology will be key to performance and client satisfaction. Data analytics will equip investment firms to provide business, to make timely tax-informed investment decisions, and to provide investors and tax authorities with the transparency and reporting that they demand. It will also minimise uncertainty about tax liabilities.

2

Digital technologies Do or die



Technology is set to disrupt all areas of the industry. From investment advice, to research and portfolio management, through the middle and back offices to client engagement and distribution, there will be far-reaching change. While some firms are leveraging technology in specific areas of their businesses, in the future, technology experts and data scientists will become vital for success across the business.

Technology will impact every aspect of asset and wealth management, although not without human oversight. But for the first truly technology-enabled firm to emerge, the barriers between the business and technology must be broken down. That is the big challenge. A firm cannot be nimble without having tech-enabled teams and executives.

It's likely that other big technology firms will follow the lead of China's technology giants, which have used digital distribution to quickly attract billions of dollars into money market funds. Showing how the phenomenon of technology firms moving into finance is emerging elsewhere, Facebook secured a license from the Central Bank of Ireland in November 2016 for a payments service, in a move that showed its potential for distributing retail investment funds.

Illustrating the potential for disruption, 60% of respondents to our recent asset and wealth management FinTech survey viewed wealth

management as one of the sectors most at risk from FinTech in the next five years.⁷

End of the investment analyst?

While exponential advances in computing power, predictive analytics, artificial intelligence and big data are set to aid every area of investment research, people will generally still make the final investment decisions. The days of research teams with scores of analysts will soon be over. Instead, alternative intelligence-powered robotic processes will monitor and analyse every public company, as well as other financial and non-financial data. They can also process supply chain analysis and the other new forms of data that asset managers are able to source.

Already, some alternatives managers are successfully leveraging quantitative strategies and regard themselves first and foremost as technology companies.

Technology will impact every aspect of asset and wealth management, although not without human oversight.

⁷ PwC, Redrawing the lines: FinTech's growing influence on Financial Services. 2017.



We expect this trend to accelerate. Asset managers will generate alpha by harnessing the power of the largest data sets and the computing power to process data, identify correlations and back test investment strategies. Investment analysis is a task inherently suited to computers – human analysts will find themselves challenged. As some of the most innovative firms in asset management, it's likely that ETF managers will lead the way.⁸

Technology will also simplify risk management. In the past, it was difficult to run a risk model. Now algorithms enabled by cloud-based computing make it easy and cost effective to calculate risk ratios and 'what if' scenarios.

Technology-enabled investing will also lead to a blurring of the lines between asset management, banking, insurance, wealth management and technology companies. Technology and data analytics will be used to construct multi-asset outcome-based solutions using low-cost building blocks such as ETFs or index trackers. For just a small fee, computer algorithms can create customised solutions.

Additionally, highly sophisticated portfolio management systems are being made available to wealth managers. This development has already led to the rise of US self-managed accounts and is likely to become far more widely used in retail asset and wealth management in the years ahead.

Driving the middle- and back-offices to zero

As pressure mounts on firms to reduce costs, they will seek to automate or outsource everything in the middle- and back-offices. The large regional and global wealth managers and the global asset managers will either automate their in-house operations or outsource to a third-party provider. Smaller firms will outsource to the big asset servicing firms or even to global utilities that could emerge for functions such as know-your-client, transfer agency, trade processing and risk and tax reporting. Blockchain networks will emerge and further transform the industry in trading, accounting and asset servicing.

So-called RegTech, relying on artificial intelligence, will reduce compliance costs not only through automation but also by alerting firms to regulatory hurdles. For example, it can alert an asset manager to a country's beneficial holdings disclosure rules before it buys a stock so that the holding can be kept below the critical holding threshold.

Automating the middle- and back-offices will also improve data analytics, providing a lot more information about what's going on in the business. Product, deal and client profitability will become known, as well as manageable key metrics.

Digitising distribution and client engagement

Digital technologies are already disrupting the client engagement model but this is the tip of the iceberg. FinTech investment is focusing on changing client engagement. Flows of digital information will become more customised and seamless.

⁸ PwC. Live digital or die: The digital challenges that ETF sponsors and service providers must confront.

How do you communicate in a digital age? How do you tailor this to B2B and B2C? How do you get knowledge about the end customer when someone else is distributing? How do you get data and develop meaningful analytics? How can you use that for servicing and marketing campaigns?

The more firms know about their clients, the better. Their risk profile. Family life. Professional life. Greater knowledge leads to better solutions. Whether it's a new birth in the family, changes of job or death in the family, most key life events can be monitored and proactively responded to through social media, leading to better client relationships and service.

In the PwC Global 2016 ETF survey, about a third (32%) of participants expect automated advice to generate between US\$10 and US\$25 billion of new flows for ETFs in five years, while 25% expect that number to be between US\$25 and US\$50 billion. We believe that these numbers are far too low and that growth will dramatically accelerate as the cost benefit and ability to provide advice in an easy-to-use format will drive adoption.

Winners and losers

Firms are beginning to use technology to transform parts of their businesses, however, data and technology are being managed separately from other areas. Technology must be built into every area, and it's important that senior management understands the next generation of technology and how it can reinvent the business.

People in a time of technology

The type of people needed for success will change hugely. In the future, data scientists will be just as sought after as research analysts. CEOs must be able not only to run a business but also to understand the next generation of technology. There'll be a far more diverse range of skills required, as well as more innovative and agile mind sets. What's more, firms will need new ways of attracting, motivating and organising people. (See PwC's *The power to perform: Human capital 2020 and beyond*).

Firms will have to look at new ways to hire and motivate. 'Gig economy' type models of employment may become commonplace, where individuals and many of the millennial generation no longer work for a single employer.

To hire the best people, diversity in all its forms, will matter more than ever – from gender, generation, ethnicity, sexuality and disability to people with a broader range of skills, experience and industry backgrounds. Diversity will become increasingly important to business success, especially as firms seek a broader range of skills in areas such as data analysis and digital content management.

Our research shows that firms still have a long way to go in making diversity a reality and realising the benefits. This includes creating an environment in which everyone can thrive.⁹

The type of people needed for success will change hugely. In the future, data scientists will be just as sought after as research analysts.

⁹ See PwC's *No holding back: Capitalising on the power of diversity in asset management*.

Funding the future

New opportunities for profitable growth are emerging. Asset and wealth managers are filling financing gaps that have emerged since the GFC. They'll continue to provide capital for new types of real assets and new forms of corporate financing, learning new skills as they do so. They'll also play a vital part in bridging the retirement savings gap.

While this trend is already firmly established (and featured in Asset Management 2020), it will offer asset managers new opportunities as some areas of their businesses become less profitable and the need to generate alpha becomes more paramount. Over the next ten years there's great potential for asset management to generate alpha from financing real assets. At the same time, demographic trends will drive growth in assets under management globally.

There are huge financing needs. PwC has estimated that close to US\$78 trillion will be spent globally on infrastructure from 2014 to 2025.¹⁰ And in Europe and North America, there's a shortage of funding for small and mid-sized businesses, as banks have pulled back in the wake of the Basel III capital restrictions and the Dodd-Frank Act.¹¹

Investment firms will provide capital in areas such as trade finance and peer-to-peer lending. They will be more active in all aspects of syndicated lending activities traditionally undertaken by banks, e.g. arranging a syndicate of investors for large infrastructure projects.

Turning to pensions and individual retirement needs, there's a funding gap in developed and developing markets alike. This is estimated at US\$41 trillion by the Geneva Association, the insurance industry think tank.¹²

From bridges to power grids and retirement homes

We anticipate soaring growth in real assets – mainly infrastructure and to a lesser extent real estate. Over the four years from 2016-2020, we forecast a 27.5% per annum growth rate in infrastructure, slowing to 15.0% from 2020-2025. Infrastructure assets will expand more than fivefold, from US\$0.6 trillion in 2016, to US\$3.4 trillion in 2025. Alternatives as a whole are likely to expand, albeit at a lower rate of 8.5% from 2016-2020, followed by 8.7% from 2020-2025.¹³

As people in Latin America, Asia and Africa migrate to the cities, so there's urgent need for water, power and transportation facilities. Meanwhile, leaders in the US, EU and the UK have ambitious infrastructure spending plans. While infrastructure investing has been dogged by political and other issues, such is the funding gap that this asset class is likely to grow.

Infrastructure investors are likely to tackle a broader range of opportunities and risks. The transition from pure-play, low-risk infrastructure will require new skill sets and capabilities in deal sourcing, evaluation and asset management.

¹⁰ Capital project and infrastructure spending: outlook to 2025. (<https://www.pwc.com/gx/en/capital-projects-infrastructure/publications/cpi-outlook/assets/cpi-outlook-to-2025.pdf>).

¹¹ Dodd-Frank Wall Street Reform and Consumer Protection Act. July, 2010.

¹² The Pension Gap Epidemic, Challenges and Recommendations, November 2016. (<https://www.genevaassociation.org/media/954342/the-pension-gap-epidemic.pdf>).

¹³ PwC AWM Research Centre.



Asset managers will also expand their involvement in financing real estate. Investors are underweight in the sector, as measured by the Global Industry Classification Standard, particularly in Europe and Asia. They'll make greater use of ways to gain exposure such as REITS and expand more in non-traditional areas such as rented housing, logistics, multi-generational housing and affordable housing.

Replacing retrenching banks

As banks' lending activities continue to be restrained by capital- and liquidity-related regulations, so asset managers have been moving into the gaps. While the Trump administration's stated desire to roll back regulation may increase bank lending in the US, this trend remains powerful in other parts of the world. Within the EU, for example, there's a drive to increase the role of capital markets and therefore asset managers in funding business. The Capital Markets Union aims to establish the building blocks of a unified capital market by 2019.

Asset managers have also been expanding into private debt. They're funding real estate, private equity, SMEs and start-ups through private debt and peer-to-peer platforms. According to Preqin, the private debt industry managed assets of US\$595 billion in June 2016, having quadrupled in size since 2006.

New opportunities

As traditional forms of finance retrench, so new opportunities are emerging where innovative asset and wealth managers can create value. These include, for example, operational excellence in financing and management of infrastructure and real estate, as well as product development that allows more investors to access these asset classes. There are also huge opportunities in facilitating pension saving for an ageing global population as defined contribution plans continue to grow in emerging markets.

Taking responsibility for retirement

Finally, asset managers will play a growing part in investing for retirement. All over the world, governments are relying on individual retirement accounts and defined contribution plans to help people save for retirement. Expansion in these assets as the world population builds wealth and ages is one of the main forces driving our optimistic forecasts for growth in assets under management.

Even Asia's economies have rapidly ageing populations. Japan and China are greying fastest, but Singapore, Hong Kong and Thailand also have a problem. Pension provision is patchy and governments recognise the need for private pensions, although in many countries domestic tax legislation doesn't yet encourage pension saving.

Turning to Latin America, several of the leading countries have had mandatory defined contribution systems in place since the second half of the 20th Century.

In addition to pensions, as longevity rises, people will need to save more to spend on healthcare, especially in the US.

Asset managers have great opportunities if they're innovative. They must design new products and services that meet changing needs. This vital social role is one of the reasons why regulators everywhere are making sure that fees are fair and advice is suitable.

Outcomes matter



Investors want specific outcomes rather than style-focused funds. Active, passive and alternative strategies are becoming building blocks for multi-asset, outcome-based solutions. In this context, demand for passive and alternative strategies will grow, but the place for active management will remain.

In the coming years, the value of active and passive management will be more clearly defined. As they focus more on specific outcomes, investors are distinguishing between alpha and beta and what they're prepared to pay for each, even in alternative strategies such as hedge funds. Yet, they will prize true alpha from active management where they can find it.

While passive investments will form the foundation of multi-asset solutions, active and alternative investments that deliver alpha will be important components that boost performance.

Firms seeking to build multi-asset solutions are likely to do so through one of three strategies: building, buying or borrowing. Builders grow by building out their internal organisations, leveraging and developing their existing capabilities and investment talent. Buyers expand their capabilities across asset classes and strategies by acquiring people, track record and scale overnight. Borrowers partner with other

institutions, including asset managers, wealth managers and private banks, to expand their investment capabilities, access capital and take advantage of broadened distribution channels.¹⁴

For investment firms developing solutions for institutional investors, having differentiated people will be key. Talented asset allocation specialists will be critical to winning mandates and a key differentiator when designing bespoke investment solutions for institutional investors.

Active and passive complement each other

Even so, passive strategies will benefit most from the move to multi-asset solutions (see figure 3). By 2025, we forecast that active management will represent just 60% of global AuM, down from 71% in 2016. Active AuM are likely to climb from US\$60.6 trillion to US\$87.6 trillion over the nine years. Passives will gain huge market share, rising from 17% of AuM in 2016 to 25%, while alternatives go from 12% to 15%. Passives' AuM will more than double, from US\$14.2 trillion to US\$36.6 trillion; alternatives from US\$10.1 trillion to US\$21.1 trillion.¹⁵

Transparent, flexible and cheap, passive ETFs will remain popular, although ETFs will also increasingly have active strategies. ETF growth is quickening, led by US retail investors, especially younger, high-net-worth investors. But the international trend towards changing the asset and wealth manager distribution fee model

¹⁴ PwC Alternative Asset Management 2020. Fast forward to centre stage. 2015.

¹⁵ PwC AWM Research Centre.

and digitising advice will hasten the take up of these inexpensive funds globally. For example, self-managed accounts are becoming popular in the US and are built on just a few ETFs. In some jurisdictions, ETFs – both passive and active – are likely to become the most popular retail products.

But the liquidity-driven market environment that has favoured passive investment will peak at some point, possibly triggering a major market correction. Such an event would remind investors that passive funds offer no downside protection. By contrast, smart beta may be more resilient while active strategies should be the winners.

What's more, as quantitative easing declines, there will be greater dispersion, leading to a greater emphasis on active stock selection and asset allocation. And as passive management takes greater market share, so the relationship between a company's fundamental strengths and its stock price is likely to weaken, leading to inefficient markets that active managers can exploit.

Not all managers will rise to the occasion but skilled active managers should do so. So-called closet tracking funds, which hug an index yet charge fees commensurate with active management, will become a thing of the past.

Figure 3: Global AuM projection for 2020 and 2025 in USD trillion Base scenario

AuM 2016



■ Passive 17% 14.2
■ Alternative 12% 10.1
■ Active 71% 60.6

AuM 2020e



■ Passive 21% 23.2
■ Alternative 13% 13.9
■ Active 66% 74.0

AuM 2025e



■ Passive 25% 36.6
■ Alternative 15% 21.1
■ Active 60% 87.6

Source: PwC AWM Research Centre

Alternative strategies' contrasting fortunes

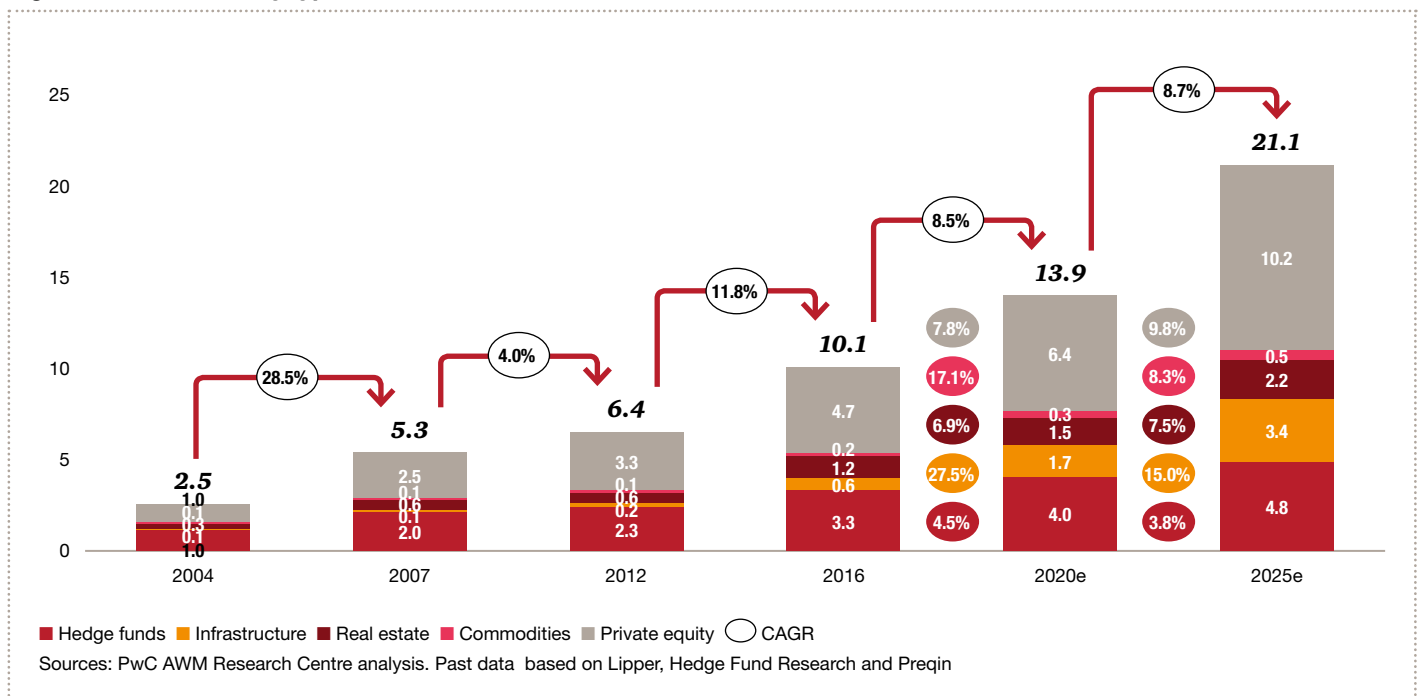
Alternative strategies will continue to grow. Real assets – including infrastructure and real estate – are set to be among the fastest expanding (see figure 4). Over the four years from 2016-2020, we forecast a dramatic 27.5% per annum growth rate in infrastructure, slowing to 15.0% from 2020-2025. Infrastructure assets will expand more than fivefold, from US\$0.6 trillion in 2016, to US\$3.4 trillion in 2025. Real estate is likely to expand by 6.9% per annum in the first period, followed by 7.5% in the second, doubling AuM from US\$1.2 trillion to US\$2.2 trillion. Real assets will be rewarded for delivering alpha through operational expertise.

Private equity, which is a more mature asset class, will expand annually by 7.8% and 9.8% respectively for the two periods, rising from US\$4.7 trillion to US\$10.2 trillion.¹⁶ With surplus

capital to put to work, private equity houses will continue to expand into specialist niches, such as technology and energy, as well as becoming even better at extracting value through, for example, longer holding periods.

Hedge funds, generally, will face differing fortunes following years of inconsistent average performance. Even so, our model forecasts that assets will grow at rates of 4.5% and 3.8% for 2016-2020 and 2020-2025 respectively, going from US\$3.3 trillion to US\$4.8 trillion by 2025.¹⁷ Survival of the fittest will see poor performers or undifferentiated niche strategies shrinking. Those offering multi-asset solutions, credit and special situations investing, and producing consistent alpha, should prosper. What's more, a return to sideways moving markets, with more security price dispersion, should offer better opportunities to generate differentiated risk-adjusted returns.

Figure 4: Alternatives by type in USD trillion Base scenario



¹⁶ PwC AWM Research Centre.



Scale or excellence

As outcome-based solutions take over from products, asset managers must decide their place in the industry of tomorrow. Will they have the scale to package and provide multi-asset outcome-based solutions or will they stick to offering one of its building blocks but do so with excellent performance?

Quantitative, factor-based investing has revealed that some of what was previously thought to be alpha resulting from manager skill is in fact market beta, which can be cheaply replicated. That said, many hedge funds will continue to deliver outcomes that investors seek, including attractive levels of alpha.

ESG investing grows

Notably, environmental, social and corporate governance (ESG) investing will grow rapidly. By 2025, it will increasingly be accepted in the US due to rapidly increasing client demand and regulatory influence. Whether millennials, HNWIs or institutional investors, there is a rapidly rising demand for forms of ESG investing evident in thematic and ESG-integrated styles across mutual funds, impact investing private equity and bespoke institutional mandates. In Europe, ESG investing is already integrated into many institutional mandates and part of a favoured approach for HNWIs. In Asia, institutional investors increasingly look for asset managers with ESG capabilities.

At the same time, a growing body of evidence shows that companies with strong ESG credentials outperform. In particular, studies show that companies focusing on the ESG indicators most financially relevant to their industry tend to perform well.¹⁷ Additionally, companies are getting better at disclosing the ESG indicators that are most material to their long-term profitability.

This virtuous combination of burgeoning demand and investment rationale will drive the ESG asset pool's rapid growth. It's not only active managers pushing for better management of ESG issues; passive investors are also requesting this as part of their public commitment to long-term value creation. ESG outcomes are likely to become an integral part of investment solutions, and ESG analysis an essential investment tool.

¹⁷ Khan, Mozaffar and Serafeim, George and Yoon, Aaron S., Corporate Sustainability: First Evidence on Materiality (November 9, 2016). The Accounting Review, Vol. 91, No. 6, pp. 1697-1724.. Available at SSRN: <https://ssrn.com/abstract=2575912> or <http://dx.doi.org/10.2139/ssrn.2575912>



Conclusion

The tail wind of rising asset prices, growing AuM and stable fees that has prevailed for more than 20 years is being disrupted by seismic changes. Since the 2008-2009 GFC, the forces of regulation, technology and fierce competition have begun to usher in transformational change. This period of reinvention will accelerate rapidly in the years ahead, forcing the industry to reimagine itself.

Things will look very different in five to ten years' time. Fewer firms will manage far more assets significantly more cheaply. Technology will be vital across the business. And, some firms will have discovered new opportunities to create alpha, and restore margins.

With change accelerating, all firms must decide how they will compete in tomorrow's world. Will they be scale or niche players? How will they become more productive?

In our view, asset and wealth managers must act now to focus on three things as their industry moves to a new paradigm:

1. Strategy

Asset and wealth managers must be more efficient and entrepreneurial, being prepared for success in some areas and failure in others. All firms must have a view of the landscape of tomorrow, a clear strategy and know their differentiating capabilities. They should reorganise their business structure to support the differentiating capabilities and cut costs elsewhere.¹⁸ As befits a time of great change, they must have a long view, take radical steps and invest in building their businesses strategically.

2. Technology

Every firm must embrace technology as it impacts all functions. Artificial intelligence, robotics, big data and blockchain are transforming the industry. Technology will determine which firms are the winners in a fast-changing landscape.

3. People

Old ways of hiring and nurturing people are changing. New skills are needed and new employment models must be embraced. Hiring and retaining the best will depend more than ever on diversity and inclusion, and meeting the needs of the whole person. Talent is a global challenge and excellent people with leadership skills will be absolutely vital as firms reinvent themselves – moving into new countries, new technologies, different distribution channels and leading-edge products.

¹⁸ <https://www.strategyand.pwc.com/fitforgrowth>.

Appendix

Forecasting methodology

I. Overall methodology

In terms of our projections we use econometric modelling to obtain our baseline estimates. The AuM is used as the target variable (based on data from 2004 to 2016) and various macroeconomic indicators from the International Monetary Fund (IMF) are used as explanatory variables. We use proprietary statistical software to search among different possible models. We have tested multiple models in levels, in differences, in logs, with lags and without lags and have shortlisted those statistically significant models for each country. These models are further examined per country and the most economically plausible model is selected.

Both the AuM as well as the explanatory factors from IMF entering our models are denominated in USD. When we conduct our analysis for the Asset and Wealth Management industry, we generally include an overlay related to exchange rate fluctuations in particular markets.

We have also taken into account qualitative information and consulted subject matter experts to see possible factors that could affect the performance of our models.

II. Data, sources and definitions

The sources we have used are widely accepted sources among the industry. These are Lipper, ICI, Preqin, SWF Institute, Credit Suisse Wealth Report, City UK, Towers Watson, World Bank, FSB and OECD.

1. Mutual funds

We used the ICI definition of mutual funds.

2. Mandates

Mandates are separately managed and discretionary accounts.

3. Alternatives

Alternatives are defined as Private Equity, Real Estate, Infrastructure, Commodities and Hedge Funds.

4. Pension funds

Pension fund assets are defined as assets bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits.

5. Insurance companies

We use total financial assets of life and non-life insurance companies, and include investment portfolios.

6. HNWI

High net worth individuals are defined as having at least one million USD in financial assets.

7. Mass affluent wealth

Mass affluent wealth is defined as the wealth of the population holding between 100,000 and 1,000,000 USD. For mass affluent wealth we also looked at local regulators to obtain the latest data for 2016.

8. SWFs

We use the SWF Institute's definition of sovereign wealth funds (SWFs), including both commodity and non-commodity SWFs.

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