#### **Deutsche Bank** Markets Research



Europe

**Banks** Banks Industry Global Wealth Managers



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#### **Special Report**

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#### Time to Advance and Defend

In our inaugural Wealth Management report last year, we said that given structural headwinds, the industry has to Run Faster To Stand Still. A year on, valuations have reached new record highs while rising rates only partially offset intensifying pressures. In this report, we argue that for wealth managers to move forward, they have to both protect their existing profitability and invest more in growth initiatives. It is time for wealth managers to both advance and defend their position.

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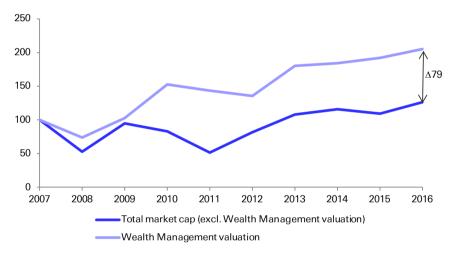
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# Joint Executive Summary

Wealth Management valuations continue to increase (+7% YoY) and have reached record highs. At the same time non-Wealth Management bank business valuations grew more quickly over the course of last year (+16% YoY), driven by strong Wholesale and Commercial Banking performance as well as market expectations for an easing regulatory environment, lower taxes and higher interest rates. Wealth Management units now account for 35% of the sum of parts bank valuations for the leading bank-owned Wealth Managers, down 2 percentage points compared to last year but still more than double the 16% observed in 2007.

Figure 1: Equity market value development of overall bank vs. Wealth Management unit – Indexed to 2007, sample of leading Wealth Managers, sum of parts analysis



Source: Oliver Wyman analysis

We have started to see a number of Wealth Managers making headway in growing their revenue base while continuing their cost efficiency efforts. Overall, the industry has made limited progress in improving profitability. Structural headwinds are set to intensify as cost pressures combine with even stronger fee compression. We therefore continue to believe that the industry will struggle to meet market expectations. To win in this environment Wealth Managers must not only continue their rigorous focus on costs; they also need to accelerate implementation of revenue initiatives while starting to identify new value sources beyond the traditional Wealth Management value chain.

Despite cyclical tailwinds and encouraging Q1 results, Wealth Managers will continue to face a number of structural headwinds that endanger revenue growth and threaten to erode profitability levels

Rising US\$ rates represent cyclical upside, but growth in Assets under Management (AuM) is expected to slow and structural industry challenges will persist: trading and managed account fee levels continue to be squeezed,



lending growth is slowing down and the onset of the Automatic Exchange of Information (AEOI) has started a regularisation wave from emerging markets which we believe many underestimate in its size. Cost pressures will persist and profitability levels will continue to decline as cost rationalisation efforts have yet to translate into positive operating jaws for the industry overall.

We note a profit gap opening up between large scale and smaller Wealth Managers, driven primarily by greater top line disparity. Large scale franchises have achieved higher gross margins by attracting more AuM into fee-based accounts than their smaller peers. Results also indicate that efforts to reduce their cost base have been more successful for the largest Wealth Managers.

Figure 2: Gross and pre-tax margins and Cost Income ratios for large vs. medium and small Wealth Managers, 2012-2016, in bps



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis Note: Large defined as Wealth Managers with more than US\$ 500BN HNW AuM vs. small defined as Wealth Managers with less than US\$ 500BN HNW AuM

# Rising US\$ rates will be a boon for Wealth Managers, even if higher deposit betas temper the upside

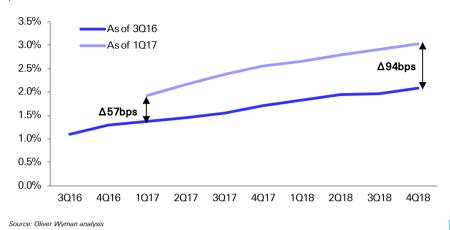
We expect a  $\sim \!\! 3\%$  increase in Wealth Management industry profitability from rising rates over the next five years.

The long expected uptick in US\$ interest rates finally came to fruition with two Federal Funds rate hikes in the past twelve months. We expect further increases over the short-to-medium term assuming the US and global economies continue to grow at their current pace.

The increases in US\$ rates will fuel higher Net Interest Margins (NIM) for Wealth Managers. While rising rates have been expected for some time, forward rate projections have been revised materially upwards – the projected uptick in NIM is also commensurately higher.

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Figure 3: US 5yr Treasury rate forecasts, 3Q16 vs. 1Q17 starting points



We also expect a general uptick in rates to positively impact NIM developments across Asia ex-Japan, which will provide some relief for global and regional players in Asia where NIM has been declining; in Europe rates are expected to remain lower for longer.

Rising US\$ rates will not only benefit US-based Wealth Managers, but also global and select regional franchises given the prevalence of US\$-denominated deposits and associated lending outside the US. US\$ deposits in Europe are largely limited to those booked offshore in Switzerland, whereas the proportion of US\$ deposits in other parts of the world is materially higher.

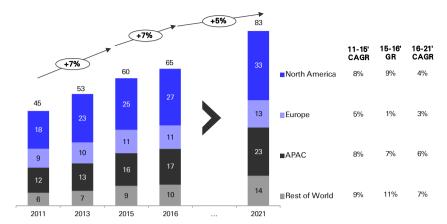
We expect higher deposit betas to partially offset this upward trend. Deposit beta measures the change in deposit rates relative to changes in benchmark interest rates, and thus indicates what percentage of the yield uptick from rising rates is passed on from banks to depositors. Our assessment concludes that deposit betas over the next five years will likely be 10 percentage points higher than in the last rising rates cycle (~45% deposit beta from 2004-2006) due to:

- Higher proportion of Ultra High Net Worth (UHNW) AuM: UHNW investors are quasi-institutional and expect a greater pass-through of higher rates (i.e. a higher deposit beta) than High Net Worth (HNW) clients. Deposit betas are therefore likely to be higher for Wealth Managers focusing on the ultra-rich, including some of the largest global players who have intentionally steered their businesses toward this segment.
- Balance sheet evolution: Liquidity requirements are higher for the largest banks, many of whom have significant global Wealth Management operations. Consumer deposits are treated favourably under the Liquidity Coverage Ratio (LCR) / Net Stable Funding Ratio (NSFR) provisions, hence banks will compete more fiercely for sticky deposits from Wealth Management clients.

#### AuM growth is likely to slow down and miss collective expectations

2016 saw global AuM growth of 7%, higher than our expected medium-term annual growth forecast of 5%. This was mainly driven by higher US and Rest of World growth vs. expectations.

Figure 4: Global private wealth by major region, US\$ TN



Source: Oliver Wyman analysis

Note: HNW wealth is measured across households with financial assets greater or equal to US\$ 1 million. Financial assets include investable assets (deposits, Equities, Fixed Income, mutual funds and Alternatives), excluding assets held in insurance policies, pensions and direct Rea Estate or any other real assets. Numbers exclude the effect of currency fluctuations.

In 2016, markets rallied on the back of hopes for less regulation, lower taxes and stronger economic growth under the new US administration. Cyclically adjusted price-to-earnings multiples continued to grow and are now at a record high of 29 – significantly higher compared to the previous cycle's peak of 27.

While the bull run may have extended beyond previous expectations, structurally we expect that the market will not deliver the same asset returns going forward. Rising rates are already leading to lower bond prices in the US. Alternative asset classes – defined here as private equity, hedge funds, real estate, infrastructure private debt and commodity assets – continue to offer the most attractive performance outlook; however, high asset valuations have resulted in record levels of dry powder, with Alternatives managers struggling to find attractive investment opportunities.

Net New Money (NNM) will continue to be the main driver of AuM growth over the next five years, representing 55% of global AuM growth. Emerging Markets NNM growth will account for  $\sim$ 40% of global AuM growth.

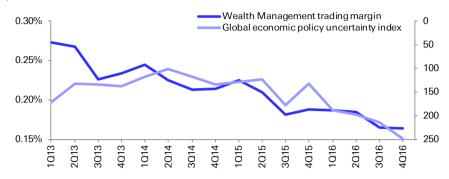
#### Downward pressure on trading and managed account fee levels will persist

With current business models unchanged, we expect Wealth Managers' trading and fee margins to continue their decline, in light of greater transparency, disruptive competition, modest investment returns and a continued shift from active to passive strategies. Our proprietary survey of more than 1,000 global HNW clients across China, Germany, Hong Kong, Singapore, Switzerland, UK and the US shows that pricing pressures have been stronger in Europe compared to the US.

Expectations that increasing market volatility will drive Wealth Managers' trading revenues are likely wrong – historically, no correlation can be observed between the industry's trading margins and market volatility. As the graph below shows, trading activity does decline with economic policy uncertainty which we believe will not diminish in the near-term, further pressuring trading margins.

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Figure 5: Trading margin development and correlation with economic policy uncertainty



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis Note: Trading margin defined as trading revenues over total AuM

Wealth Managers must re-assess their portfolio allocation strategies to address client demand for more dynamic asset allocation during periods of market volatility.

#### Lending growth is set to slow going forward

Lending growth – the primary driver of value creation for Wealth Management franchises in recent years – is unlikely to continue at the same pace. While loan volumes continue to grow in North America as regional players strategically invest to increase lending penetration from a low base (~6% debt-to-AuM ratio at US-based Wealth Managers, compared to 40% from a consumer balance sheet perspective), credit has stagnated and even begun to shrink in Europe where penetration levels are double those in North America. In Asia-Pacific, where lending penetration has historically been highest, we have seen the debt-to-AuM ratio decline over the past three years.

Figure 6: AuM-weighted loan penetration, by region



Source: Company data, Deutsche Bank Research, Oliver Wyman analysis

Individual banks with low lending penetration can still use credit as a one-off lever to lift results, but the industry as a whole should not expect the lending expansion to continue.

Structured lending solutions or cashflow-based lending still presents growth opportunities. However, these are more limited in nature given lower demand among core HNW clients, and at the same time lower risk appetite of Wealth Managers to make non-asset-based financing solutions available to these clients. Wealth Managers are likely to have more success offering structured lending opportunities to UHNW clients.

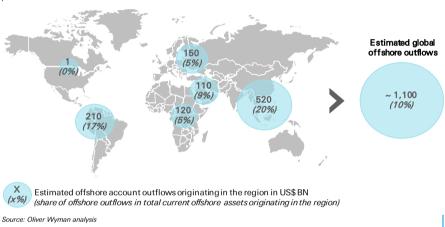


Regularisation pressure has shifted from developed to emerging markets with the onset of AEOI – not only offshore-focused, but also onshore Wealth Managers will feel the pressure

Over the past five years we have seen a significant wave of regularisation, the process of normalisation of non-tax-compliant European and North American cross-border assets (i.e. the first regularisation wave). The onset of AEOI paired with the growing trend towards tax amnesties has started further material regularisation outflows from assets originating in emerging markets (i.e. the second regularisation wave).

We estimate that US\$ 1.1TN of AuM will flow out of offshore accounts as a result of the second regularisation wave. Offshore AuM originating in APAC (ex-Japan) and Latin America will suffer most with almost 20% of assets at risk.

Figure 7: Estimated offshore account outflows by region of origin, US\$ BN



Offshore players have been experiencing large outflows for some time. We estimate that offshore centres in developed markets (e.g. Switzerland) have already seen more than 50% of expected total outflows from the second regularisation wave, while outflows from offshore centres in emerging markets (e.g. Hong Kong and Singapore) are expected to accelerate over the next quarters. We expect the majority of regularisation-driven outflows to hit the industry in advance of the full implementation of AEOI by the end of 2018.

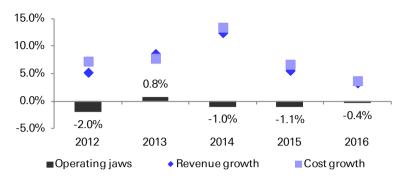
Repatriation rates vary by region, but remain below 15% on average. Overall, we estimate that especially onshore Wealth Managers in APAC and Latin America are likely to benefit from US\$ 200BN in repatriated inflows.

# Globally, Wealth Managers continue to struggle to deliver positive operating jaws

Industry Cost Income Ratios (CIRs) continue in the high 70s – almost 10 percentage points above pre-crisis levels. Cost pressures are likely to persist given that regulatory pressures will continue, most notably for global franchises. Successes in reducing CIRs at Wealth Managers have been limited so far. Efforts have largely been tactical, with only a few franchises managing to address costs structurally. Over the past three years cost growth has outpaced revenue growth for the Wealth Management industry as a whole. We expect that slower revenue growth in the future will exacerbate the issue.

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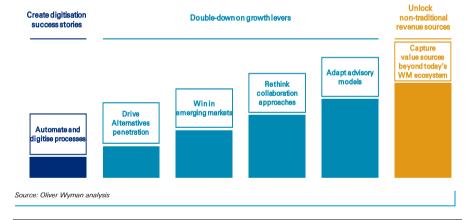
Figure 8: Operating jaws 2013-2016, sample of leading Wealth Managers



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis

While conventional cost rationalisation efforts still offer significant potential, we argue that digitising middle and back office processes provides the largest source for productivity gains. Furthermore, in order to raise profitability levels Wealth Managers should double down on revenue growth levers and at the same time capture new value sources outside the traditional Wealth Management value chain.

Figure 9: Initiatives to optimise the existing business model and capture new revenue sources



# Middle and back office digitisation represents the greatest cost lever to Wealth Managers going forward

#### Focus on targeted digital process re-engineering

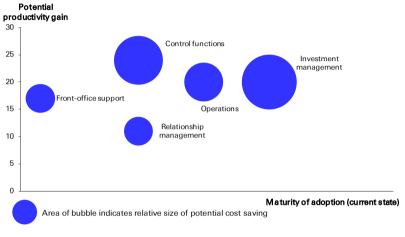
Redefining the approach to employing digital capabilities across the value chain can reduce operating expenses between 9-11% over the next five to eight years. To achieve this, the enigma of how to successfully implement digital process re-engineering needs to be solved.

Digital capabilities such as advanced data science, machine learning and robotics allow Wealth Managers to significantly enhance processes, promising not only gains in quality, accuracy and security, but also in efficiency and costs. So far, the front office has been the main focus of digitisation efforts, but we see major unrealised potential in the middle and back office.



Control functions in particular represent a material opportunity for productivity gains in light of major cost increases over the past several years. Financial technology companies showcase how to use digital capabilities to enhance effectiveness and efficiency in control function processes, such as the use of cognitive computing for real-time KYC / AML solutions or machine learning to optimise credit and fraud modelling.

Figure 10: Potential cost savings through productivity gains from automation and digital adoption, %



Source: Oliver Wyman analysis

Obstacles such as legacy infrastructure, challenges in attracting digital talent and governance continue to weigh hard on the success prospects of Wealth Managers' end-to-end digitisation. Prioritising high-impact digitisation projects and efficiently allocating investment budgets can increase success rates. Delivery risk of large transformations can be avoided by breaking the challenge of end-to-end digitisation into smaller parts, where objectives can be achieved in weeks or months, not years.

Digitisation ideas need to compete for resources and funding. For every launch of a new initiative, we expect dozens of ideas will have been evaluated and tested. High value-generating digitisation ideas need to be prioritised. Funding must be provided based on a systematic process, similar to venture-oriented start-ups. A central, independently run evaluation process of all digitisation business ideas can help.

The responsibility to develop and (co-)deliver digitisation ideas need to remain within business units in order to foster a culture of ownership and sense of urgency. Rapid course-correction in response to evolving customer expectations, competitive landscape and regulatory changes is the new norm.



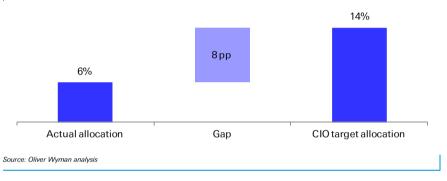
# Wealth Managers need to double down on revenue initiatives to change their growth trajectory and prepare for a more modularised world

Increasing Alternatives penetration represents a win-win opportunity for HNW clients and Wealth Managers

We estimate that at current average fee levels, a 1 percentage point increase in Alternatives penetration results in a proportionate increase in fee revenues. This represents a significant opportunity for Wealth Managers.

In the hunt for return and risk diversification in a low yield environment, Alternatives allocations in client portfolios have been rising in recent years – our research continues to indicate significant upside. Client demand and CIO portfolios indicate a target allocation of ~14%. Actual client portfolio penetration is 8 percentage points lower, representing a ~US\$ 5TN gap.

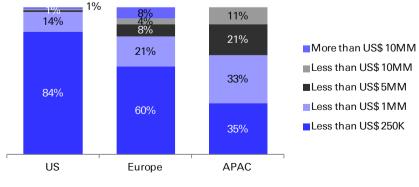
Figure 11: Actual vs. CIO target Alternatives asset allocation, % of total AuM



This gap results from both supply and demand side challenges, such as insufficient advisor knowledge, limited access to high-quality Alternatives managers and products, and unfavourable product characteristics.

Supply of high quality Alternatives is constrained and competition for access with the traditional institutional investor base is fierce, especially for those managers with a long-standing positive track record. Our HNW client survey reveals that a majority of investors in the US and Europe are not willing to lock up more than US\$ 250 K in a single Alternative asset investment.

Figure 12: Maximum investment in a single Alternative product



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Source: Oliver Wyman HNW client survey 2017



Liquid Alternatives mutual funds, once seen as a potential solution to overcome these product challenges, have not proven to be an attractive substitute. In the US, asset levels in liquid Alternatives have plateaued for three years and funds have produced negative returns on average.

As a consequence, Wealth Managers who want to grow their Alternatives business need to focus on three main areas: access, product structuring and distribution.

High quality, yet provider friendly new product approval processes, strategic relationships with Alternatives managers and large enough, recurring volumes are important when competing for access. Product structuring requires solutions to address client concerns with illiquidity and concentration risk. Distribution success will depend on the quality and availability of product specialists and advisor training, which in turn will drive client education on the return and diversification benefits of Alternatives.

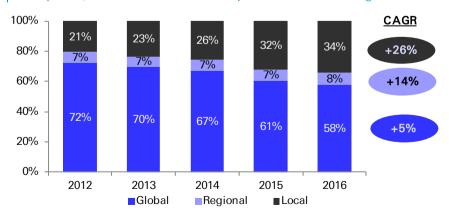
# Winning onshore in emerging markets requires larger scale platforms and stronger local capabilities

Emerging markets continue to be a key growth driver for Wealth Managers. We estimate that  $\sim\!60\%$  of AuM growth will stem from emerging markets over the next five years. To meet ambitious AuM growth targets set out by the industry, global Wealth Managers will need to review their game-plans to capture onshore emerging markets growth.

Historically, most emerging markets saw a large proportion of their AuM being managed offshore. The majority of future growth will originate in onshore markets. Local and regional players show early success in growing their onshore platforms, while global players are facing the challenge of how to win onshore. Global Wealth Managers have a strong position in the offshore hubs serving emerging markets, but with few exceptions, have struggled to find a winning formula onshore.

In some regions such as emerging Asia, global Wealth Managers have lost market share in recent years despite their success in generating growth. Newly emerging, local competitors have been highly successful in building either large pan-regional platforms or establishing more niche market business models that have seen strong growth rates.

Figure 13: Overview of emerging Asia Wealth Managers' market share development, % of AuM based on a sample of 30 Wealth Managers



Source: Oliver Wyman analysis

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Competition is intensifying and we expect future growth to come at a higher cost. While in the past a platform size of ~US\$ 20BN in AuM was adequate to be successful within one emerging markets' region, we estimate this number will increase to US\$ 30BN+. Absent any significant business model changes, ~30% of global Wealth Managers will not reach the minimum platform size by 2020. As a result, consolidation is already underway and expected to continue.

To win onshore in emerging markets, Wealth Managers need to adjust their business models, e.g. turning transaction relationships into advisory relationships, addressing both financial and non-financial assets, ensuring relevance to the next generation, partnering with local Wealth Managers and/ or growing through acquisitions. The right path depends on the Wealth Managers' legacy in emerging markets as well as their capabilities and ambitions. Accessing onshore wealth in emerging markets directly is an opportunity likely limited to the largest global Wealth Managers. Smaller players have better odds of success by partnering with local Wealth Managers, exchanging overseas investment capabilities for access to the local banks' clients.

# Wealth Managers need to rethink their approach to bank internal collaboration models to generate greater returns on time invested

We still see a strong untapped potential to capitalise on revenue synergies by re-evaluating collaboration and integration models between Wealth Management and other bank businesses. Although most integrated players have already implemented a degree of cross-business collaboration based on revenue sharing agreements or formalised referral models, current collaboration levels of Wealth Management units with other banking businesses are still limited – our HNW survey respondents indicated only a minority of their banking relationships under the same roof were referred by their Wealth Manager.

Wealth Managers need to move away from their current scatter-shot approach to collaboration. Certain initiatives have much greater upside potential than others, and Wealth Managers need to do a better job of identifying these.

There are several opportunities with significant collaboration potential that have been relatively un-explored to date, such as Workplace Banking for large corporates and their employees. Workplace Banking provides employees with a comprehensive suite of banking and Wealth Management solutions from a single provider, offered through the employer. Such arrangements are increasingly commonplace in APAC – we believe the business case and value proposition can be extended to other markets as well. Our primary research suggests there is an opportunity across regions to consolidate clients' multiple banking relationships under one roof. Wealth Managers should use preferential pricing and differentiated service levels as part of Workplace Banking to help consolidate client assets.

# Advisory models need to be adapted to capture evolving client needs representing 39% of global HNW wealth

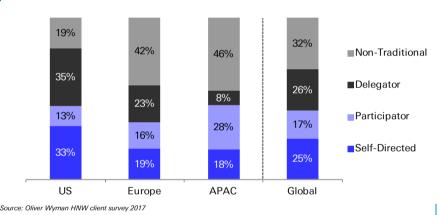
As technology innovations become mainstream and client preferences change, Wealth Managers need to revise their value propositions to retain and possibly grow client wallet. Our research indicates that while access to a trusted advisor is still in high demand, clients are looking for greater flexibility than ever in how they manage their money and how they engage with their Wealth Managers.



We see three key areas that Wealth Managers will need to address to stay relevant going forward:

Satisfying non-traditional client needs: Our primary research indicates that up to 32% of clients do not fit neatly into the archetypes associated with Wealth Managers' traditional offerings (self-directed, participator, delegator). Such clients represent 39% of global HNW wealth and are currently making do with a combination of Wealth Managers. Developing more 'flexible' value propositions is key to capturing this incremental revenue opportunity. For one group of clients currently falling between the cracks, we see an opportunity for Wealth Managers to rethink their CIO models to more dynamically reallocate assets. Taking one step further, such models can also be adapted to translate clients' market views or even personal values into trading strategies. It is a win-win opportunity as it can simultaneously drive greater client engagement and satisfaction and generate higher client returns.

Figure 14: Percentage of HNW respondents by Wealth Management archetype



- HNW survey shows there is currently limited appetite for roboadvisory products among HNW clients in the US and Europe. Wealth
  Managers investing significant dollars in such technology with the
  hope of driving new HNW client acquisition will likely be disappointed.
  However, there is clear demand among younger, mass affluent clients

   Wealth Managers should use robo-products to attract those
  investors likely to become HNW clients in the future. In APAC, where
  HNW clients are younger and more tech-savvy, almost one third of
  clients are looking for an automated advisory product. Wealth
  Managers operating in the region must either develop functionality in
  house or partner with independent providers to offer these products to
  their clients, as this will be table stakes going forward.
- Targeted investment in digital capabilities and communication channels: Wealth Managers must identify and invest in digital capabilities that are relevant for specific client segments. 'Digital' does not mean all things to all people. Almost 40% of Asian investors prioritise the ability to communicate with their Wealth Manager using social messaging, making this an investment priority, yet they do not value digital financial planning or portfolio construction tools. In

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contrast, European and US HNW investors have almost no interest in social messaging but do value goal-setting tools, suggesting players in these markets should invest in this functionality. Wealth Managers need to build flexible products which bundle specific digital capabilities alongside non-digital elements. This movement away from a one-size-fits-all model will not only improve the client experience, but should also allow cost savings as Wealth Managers do not need to provide all services to all clients.

# Wealth Managers need to unlock non-traditional revenue sources

### Capture new value sources beyond the traditional Wealth Management value chain

Historically, Wealth Management services have been delivered by firms with an integrated, in-house stack of capabilities. This integrated model will become less defensible in light of digitisation. Digitisation makes it dramatically easier to plug-and-play services from multiple providers into a seamless client experience.

We identified three potential future business model choices for Wealth Managers in order to build and sustain new value sources given revenue growth levers in the traditional vertically integrated Wealth Management value chain have a natural limit.

#### Figure 15: Evolving business model choices to capture new value sources

Business model choice	Value chain location	Typical activities	Potential Wealth Manager opportunity
Demand aggregator providing unique, edge client experience	•	Maintain consolidated client view	Monetise access to clients through select third party relationships
		Provide interaction and communication channels with clients	Monetise strong brand to provide additional client services, e.g. cyber security, online privacy
		<ul> <li>Advise clients</li> </ul>	
Platform provider connecting ecosystems	Data and infrastructure	Broker products, services and processes	Monetise non-bankable assets, e.g. private market platform for all non-bank intermediated assets     Monetise existing infrastructure, e.g. investment platform and engines, compliance tools, financial crime analytics
		<ul> <li>Ensure standardisation</li> </ul>	
		Provide specialised data or analytics	
Component supplier providing specialised products & services	Financial products and services	Provide specialised services	Monetise best-in-class products and services, e.g. asset management
Source: Oliver Wyman ana	alysis		

**Demand aggregators** (or the Amazon model) differentiate by providing allencompassing experiences centred on client needs and objectives. Given traditional Wealth Managers' strong client platforms, we see an opportunity to monetise access to these clients.

**Platform providers** (or the Uber model) differentiate with platforms that underpin and broker services between many Wealth Managers and clients across ecosystems and reap significant financial benefits through subscription or transaction-based fees.



**Component suppliers** (or the Salesforce model) differentiate by crafting products that plug into a range of industry processes and customer experiences. This business model is most attractive for Wealth Managers with superior niche products and capabilities.

Wealth Managers will need to make choices about their future position in the value chain. It is unlikely that any Wealth Manager will be able to excel across the entire value chain, and sustain the level of investments required to win in every field. Hence, Wealth Managers need to make choices on where and how to compete.

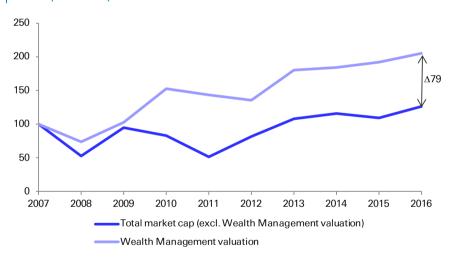
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# Structural headwinds still outweigh cyclical tailwinds

# Wealth Management valuations continue to increase (+7% YoY) and have reached record highs

At the same time non-Wealth Management bank business valuations grew more quickly over the course of last year (+16% YoY), driven by strong Wholesale and Commercial Banking performance as well as market expectations for an easing regulatory environment, lower taxes and higher interest rates. Wealth Management units now account for 35% of the sum of parts bank valuations for the leading bank-owned Wealth Managers, down 2 percentage points compared to last year but still more than double the 16% observed in 2007.

Figure 16: Equity market value development of overall bank vs. Wealth Management unit – Indexed to 2007, sample of leading Wealth Managers, sum of parts analysis



Source: Oliver Wyman analysi

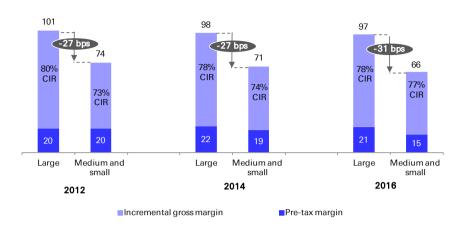
We have started to see a number of Wealth Managers making headway in growing their revenues base while continuing their cost efficiency efforts, but overall the industry has made limited progress in improving profitability.

#### Performance skews will further widen in the future

We have noted a profit gap opening up between large scale and smaller Wealth Managers, primarily driven by greater top line disparity. From 2012 to 2016 the gross margin gap between large players and smaller rivals increased from 27bps to 31bps, translating into a 6 bps pre-tax margin gap.



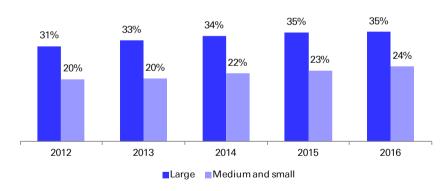
Figure 17: Gross and pre-tax margins and Cost Income ratios for large vs. medium and small Wealth Managers, 2012-2016, in bps



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis Note: Large Global defined as Wealth Managers with more than US\$ 500BN HNW AuM and a global footprint vs. small/regional defined as Wealth Managers with less than US\$ 500BN HNW AuM and a regional footprint

Larger Wealth Managers have been more successful in leveraging their platforms and high fixed cost base to drive revenue growth than their smaller counterparts. They have been faster to transition their clients into mandates and can offer a wider array of advisory products. These products offer significantly higher returns on assets (ROA) than transactional accounts. While smaller Wealth Managers have been growing their mandate penetration more quickly in recent years there is still a long way to go to close the gap.

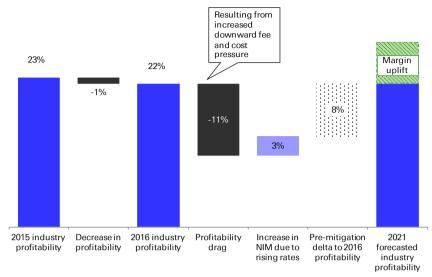
Figure 18: Percentage of AuM in fee-based accounts; Large vs. Medium and small Wealth Managers



Source: Company data, Oliver Wyman analysis

Despite cyclical tailwinds and some encouraging Q1 results, Wealth Managers will likely continue to face a number of structural headwinds that endanger revenue growth and threaten to erode profitability levels. Last year's higher than expected AuM growth was able to almost entirely safeguard profitability levels. In the next five years, we believe the industry will continue to face an eleven percentage point profitability drag due to persistent downward fee and cost pressure. Pre-mitigation, we continue to expect an erosion of industry profitability levels by more than one-third.





Source: Oliver Wyman analysis

Rising US\$ rates represent cyclical upside, but AuM growth is expected to slow and the structural industry challenges will persist: trading and managed account fee levels continue to be squeezed, lending growth will slow and the onset of AEOI has started a regularisation wave from emerging markets which we believe many underestimate in its size. Cost pressures will persist and profitability levels will continue to decline as cost rationalisation efforts have yet to translate into positive operating jaws for the industry overall.

North American and European Wealth Managers will feel the strongest profitability pressure due to increased competition and transparency putting pressure on fees. While we expect less top-line pressure for APAC players, increased regulatory scrutiny in the region is likely to increase costs.

In order to keep or even raise current profitability levels, Wealth Managers must not only continue a rigorous focus on costs; they also need accelerate implementation of revenue-enhancing initiatives while capturing new value sources outside the traditional Wealth Management value chain.

# 1.1) Rising US\$ rates will likely be a boon for Wealth Managers, even if higher deposit betas temper the upside

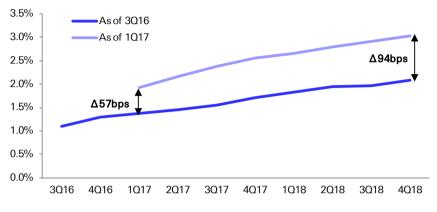
We expect a ~3% increase in Wealth Management industry profitability from rising rates over the next five years.

Over the past twelve months, the long awaited uptick in US\$ interest rates finally came to fruition. The Fed twice raised the Federal Funds rate by 25bps each time, and has signalled further increases over the short-to-medium term, assuming the US and global economies continue to grow at their current pace. These increases in US\$ rates will likely be supportive for Wealth Managers' NIM, as banks re-price loans and advances more quickly than they do deposit rates. Further, any excess deposits that are not translated into lending flows can be invested in higher yielding short term liquid securities – the impact on Wealth Managers will depend on internal treasury and funds transfer pricing models.



While rising rates have been expected for some time, forward rate projections have been revised materially upwards now that the process is officially underway. The projected uptick in NIM is also commensurately higher.

Figure 20: US 5yr Treasury rate forecasts, 3Q16 vs. 2Q17 starting points



Source: Oliver Wyman analysis

Given higher macro-uncertainty in Europe and lower regional growth, we expect Eurozone rates to remain lower for longer. We do not expect any material NIM uptick in this region. In APAC (ex-Japan) rates are projected to rise over the same period, though not to the same extent as US\$ rates. We expect this to positively impact NIM developments in the region, which will provide some relief for global and regional players in Asia who have seen NIM pressured in recent years on competitive deposit pricing.

Rising US\$ rates will also benefit global and select regional franchises given one third of US\$-denominated deposits are held by non-US banks. US\$ deposits in Europe are largely limited to those booked offshore in Switzerland, whereas the proportion of US\$ deposits in other parts of the world is materially higher. Demand for dollar deposits is increasing in some of the largest Asian markets given local economic growth and currency concerns. In China, while returns on foreign-currency deposits have traditionally been lower than on yuan, some banks are beginning to introduce higher-yielding US\$ products to attract or retain customers.

Those APAC players with material dollar deposit bases should see a positive NIM effect from rising US\$ rates as long as they can lend in US\$. This will likely be muted at those Wealth Managers with currency mismatches between their deposits and liabilities – we observe that some banks source US\$ deposits through their HNW client base and lend them out in the corporate bank or trade financing books.

# We expect higher deposit betas to partially offset the positive NIM effect from rising US\$ rates.

Deposit beta measures the change in deposit rates relative to changes in benchmark interest rates, and thus indicates what percentage of the yield uptick from rising rates is passed on from banks to depositors.

Several large banks with Wealth Management units have indicated they expect deposit betas to reach 50% or more over the next cycle, with some disclosing figures as high as 75%. We calculate that this will translate into a 5-15 bps



increase in deposit NIM across regions, with the majority of this driven by higher US\$ rates.

Our assessment concludes that deposit betas over the next five years will likely be 10 percentage points higher than in the last rising rates cycle (~45% deposit beta from 2004-2006). We project this will result in a ~3% increase in Wealth Management industry profitability over the next five years assuming average deposit betas of ~55%. Higher deposit betas will be driven by:

- Higher proportion of UHNW AuM: UHNW investors are guasiinstitutional and expect a greater pass-through of higher rates (i.e. a higher deposit beta) than HNW clients. Deposit betas are therefore likely to be higher for Wealth Managers focusing on the ultra-rich, including some of the largest global players who have intentionally steered their businesses toward this segment
- Balance sheet evolution: Liquidity requirements are higher for the largest banks, many of whom have significant global Wealth Management operations. Consumer deposits are treated favourably under LCR/ NSFR, hence banks will compete more fiercely for sticky deposits from Wealth Management clients.

#### 1.2) AuM growth is likely to slow down

2016 saw global AuM growth of 7%, higher than our expected medium-term annual growth forecast of 5%. This was mainly driven by higher US and Rest of World growth vs. expectations.

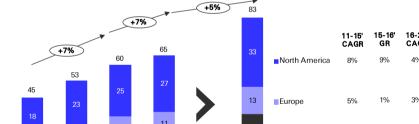
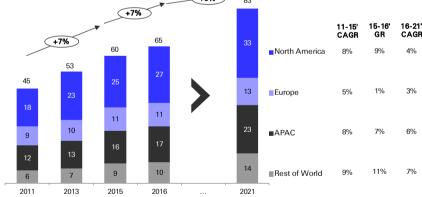


Figure 21: Global private wealth by major region, US\$ TN



Source: Oliver Wyman analysis red across households with financial assets greater or equal to US\$ 1 million. Financial assets include investable assets (deposits, Equities, Fixed Income, mutual funds and Alternatives), excluding as Estate or any other real assets. Numbers exclude the effect of currency fluctuations.

In 2016, markets rallied on the back of hopes for less regulation, lower taxes and stronger economic growth under the new US administration. We do not expect asset performance to continue at the same pace. Cyclically adjusted price-to-earnings multiples continued to grow and are now at a record high of 29 – significantly higher compared to the previous cycle's peak of 27.

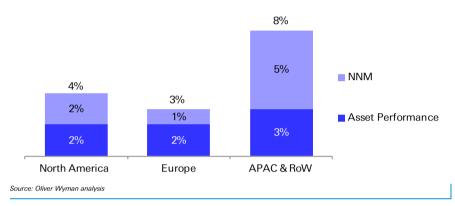
While the bull run may have extended beyond previous expectations, structurally we expect that the market will not deliver the same asset returns going forward. Rising rates are already leading to lower bond prices in the US.



Alternative asset classes continue to offer the most attractive performance outlook; however, high asset valuations have resulted in record levels of dry powder, with Alternatives managers struggling to find attractive investment opportunities. For Wealth Managers, this implies that selecting and accessing high-quality fund managers will become an even more important differentiator.

NNM will continue to be the main driver of AuM growth over the next five years, representing 55% of global AuM growth. We estimate that two-thirds of NNM will be originating in emerging markets and success in accessing emerging markets is increasingly dependent on onshore vs. offshore booking platforms.

Figure 22: AuM growth projections by region by driver – 2016-2021, % p.a.



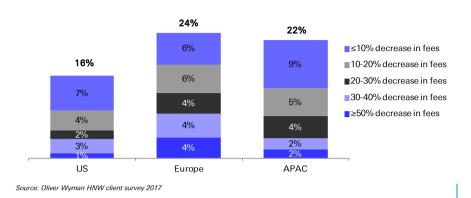
#### 1.3) Continued downward pressure on margins

With current business models unchanged, we expect Wealth Managers' trading and fee margins to continue their decline, in light of greater transparency, disruptive competition, modest investment returns and a continued shift from active to passive strategies. Average fees continue to be significantly higher in Europe than in the US. Our HNW client survey shows that 75% of clients across regions have not perceived a decrease in fees in the past three years. Pricing pressures have been stronger in Europe compared to the US.

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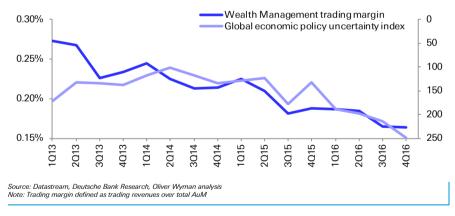


Figure 23: Percentage of HNW respondents indicating their Wealth Manager fees have declined in the past three years (total, and split by percentage decrease in fees)



Expectations that increasing market volatility will drive Wealth Managers' trading revenues are likely wrong. While we observe that investment banks' trading revenue usually benefits from increased market volatility, no correlation can be observed between Wealth Management industry's trading margins and market volatility. As the graph below shows, trading activity does decline with economic policy uncertainty which we believe will not diminish in the near-term, further pressuring trading margins.

Figure 24: Trading margins development and correlation with economic policy uncertainty



Wealth Managers should re-assess their portfolio allocation strategies to address client demand for more dynamic asset allocation during periods of market volatility.

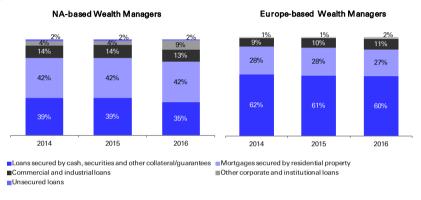
#### 1.4) Lending growth is set to slow going forward

A significant proportion of value-creation over the past five years was driven by increased lending volumes, especially in North America which saw double digit growth each year from 2012-2016. While Europe saw strong loan growth into 2014, it has since stagnated and 2016 actually saw a 2% contraction in the region. This is despite record low interest rates and hence favourable credit terms in many EU countries.



Supported by strong macro fundamentals and a booming real estate market, loan growth in North America was driven primarily by residential mortgages and Lombard lending. These two products account for 77% of Wealth Managers' loan portfolios in the region, with the remainder comprising commercial and industrial loans, corporate and institutional loans, and other unsecured lending. In contrast, Lombard lending makes up a much larger portion of HNW lending in Europe at ~60%, with residential mortgages only accounting for ~27%. Both of these products saw volume declines in Europe over the past five years.

Figure 25: Loan volume and composition of select Wealth Managers in US vs. Europe



Source: Company data, Oliver Wyman analysis

We expect loan volumes will continue to grow over the next five years in North America as regional players strategically invest to increase lending penetration from a low base; ~6% debt-to-AuM ratio at North America-based Wealth Managers. From a consumer balance sheet perspective, there is still room to grow, as typical debt-to-investible asset ratios of US HNW investors are 40%. The story is different for Europe: lending growth began to slow last year driven by stagnant AuM and lower lending penetration. We expect volume growth to recover but remain low over the next five years, primarily driven by AuM growth with unchanged penetration. Wealth Managers' penetration levels in Europe are already double those in North America, whereas the debt-to-investible asset ratio of HNW clients is lower (~33%), limiting the upside. In Asia-Pacific, where lending penetration has historically been highest, we have seen the debt-to-AuM ratio decline over the past three years, suggesting Wealth Managers should not rely on higher penetration to drive lending growth going forward.

Figure 26: AuM-weighted loan penetration, by region



Source: Company data, Deutsche Bank Research, Oliver Wyman analysis

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Individual banks with low lending penetration can still use credit as a one-off lever to lift results, but the industry as a whole should not expect the lending expansion to continue.

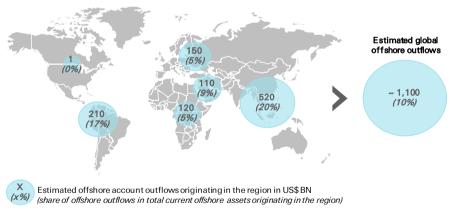
Structured lending solutions or cashflow-based lending still present growth opportunities. However, these are more limited in nature given lower demand among core HNW clients, and at the same time lower risk appetite of Wealth Managers to make non-asset-based financing solutions available to these clients. Wealth Managers are likely to have more success offering structured lending solutions to UHNW clients.

# 1.5) Regularisation pressure is shifting from developed to emerging markets

Regularisation pressure has shifted from developed to emerging markets with the onset of AEOI – not only offshore-focused, but also onshore Wealth Managers will feel the pressure. Over the past five years we have seen a significant wave of regularisation, the process of normalisation of non-tax-compliant European and North American cross-border assets (i.e. the first regularisation wave). The onset of AEOI paired with the growing trend towards tax amnesties has started further material regularisation outflows from assets originating in emerging markets (i.e. second regularisation wave).

We estimate that US\$ 1.1 TN of AuM will flow out of offshore accounts as a result of the second regularisation wave. Offshore AuM originating in APAC (ex-Japan) and Latin America will suffer most with almost 20% of assets at risk.





Source: Oliver Wyman analysis

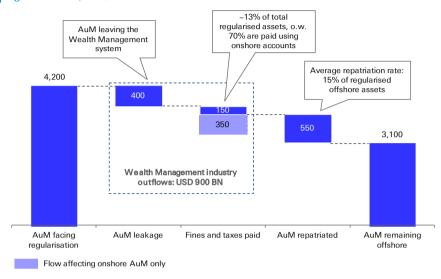
Offshore players have been seeing large outflows for some time now. We estimate that offshore centres in developed markets (e.g. Switzerland) have already seen more than 50% of expected total outflows from the second regularisation wave, outflows from offshore centres in emerging markets (e.g. Hong Kong and Singapore) are expected to accelerate over the next quarters. We expect the majority of regularisation-driven outflows to hit the industry in advance of the full implementation of AEOI by the end of 2018.

Repatriation rates vary by region and discussions with affected onshore and offshore Wealth Managers reveal that clients have used recent tax amnesties



to regularize large shares of unreported assets, but repatriation rates remain below 15% on average. Overall, we estimate that of the US\$ 1.1TN in offshore outflows, onshore Wealth Managers in APAC and Latin America are likely to benefit from approximately US\$ 200BN in repatriated inflows.

Figure 28: Estimated cross-border flows as a result of the second wave of regularisation, US\$ BN



Source: Oliver Wyman analysis

The remaining ~US\$ 900BN will likely leave the Wealth Management ecosystem as a result of the second wave of regularisation due to fines and tax payments as well as outflows into real assets. While tax efficiency will be a less important driver in the future, other reasons to hold offshore assets will remain and drive offshore asset demand e.g. access to a broader product offering and hard currency underlyings.

All in all we expect the Wealth Management industry to face a revenue drop of approximately US\$ 13BN including the positive revenue effect for onshore Wealth Managers. Offshore revenues are set to decrease by ~US\$ 14BN representing more than 10% of current revenues. Of the negative offshore revenue effect we expect 60% to be driven by the overall volume decrease and the remaining 40% to result from pressure on offshore margins due to competition and transparency.

#### 1.6) Cost pressures will persist

Industry CIRs continue in the high 70s – almost 10 percentage points above pre-crisis levels. CIRs of US players continue to be the highest at >80%, while European players exhibit CIRs in the range from 60-80%. Local players in Asia operate in the same range as their European counterparts.

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Figure 29: Cost Income ratios 2007 vs. 2015 vs. 2016 – Sample of leading Wealth Managers



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis

Cost pressures are likely to persist, given that regulatory requirements will continue to increase, notably for global franchises. Successes in reducing CIRs at Wealth Managers have been limited so far. Efforts have largely been tactical, with only a few franchises managing to address cost structurally. Over the past three years cost growth has outpaced revenue growth for the Wealth Management industry as a whole. We observe that US players have managed slightly positive operating jaws in the past year compared to their European and Asian competitors, who have suffered from much stronger cost growth than revenue growth.

Figure 30: Operating jaws 2013-2016, sample of leading Wealth Managers



Source: Datastream, Deutsche Bank Research, Oliver Wyman analysis

We expect that slower revenue growth and continued cost pressure will exacerbate the issue in the future. We see three reasons why cost pressures will persist:

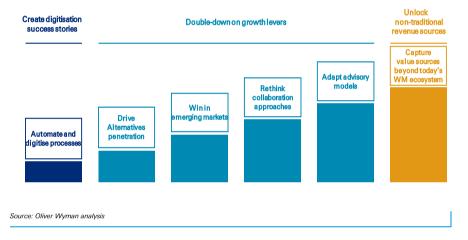
- Establishment of a new normal in transparency and KYC/AML standards structurally increases costs.
- MiFID II structural costs have not yet been absorbed into the system and will inevitably drive up costs for Wealth Managers with a European footprint. The DOL fiduciary rule will have a similar impact for players with an US footprint
- Often complex legacy infrastructures slow progress of digitisation/ automation successes



# 2) Driving future growth and profitability

While conventional cost rationalisation efforts still offer significant potential, we argue that digitising middle and back office processes provides the largest source for productivity gains. Furthermore, in order to raise profitability levels Wealth Managers should double down on revenue growth levers and at the same time capture new value sources outside the traditional Wealth Management value chain.

Figure 31: Initiatives to optimise the existing business model and capture new revenue sources



#### 2.1) Automate and digitise processes

#### Focus on targeted digital process re-engineering

Redefining the approach to employing digital capabilities across the value chain can reduce operating expenses between 9-11% over the next five to eight years. To achieve this, the enigma of how to successfully implement digital process re-engineering needs to be solved.

New digital capabilities such as advanced data science, machine learning and robotics offer solutions to current challenges of the Wealth Management industry. They allow Wealth Managers to significantly enhance processes, promising not only gains in quality, accuracy and security, but also in efficiency and costs. All Wealth Management core processes will be impacted by new digital capabilities.

The application of artificial intelligence and analytics can help Wealth Managers to improve direct client experience, advisor productivity as well as back-/ middle-office efficiency and enhanced decision making. Smart analytics allow more accurate client targeting, increased quality of advice and product offering through real-time financial planning, personalised reporting, and enhanced financial analysis. Robotic process automation can be applied in

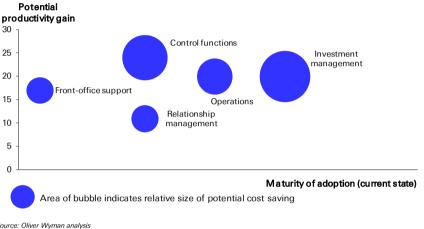
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various routine activities of client onboarding and diligence, portfolio rebalancing, risk management, and compliance and regulatory reporting, e.g. background checks, KYC/ AML processes.

To date, Wealth Managers have focused their digital efforts on the front office of the value chain. We estimate that more than 50% of digital investment budgets have been targeted to the front office with the aim to increase advisor productivity and improve the client experience. Digitisation of the middle and back-office still have large untapped efficiency potential especially given increasing regulatory cost burdens in control functions.

Figure 32: Potential cost savings through productivity gains from automation and digital adoption, in %



Source: Oliver Wyman analysis

Control functions in particular represent a material opportunity for productivity gains in light of significant cost increases over the past years

The entire banking industry undertook high investments in control functions, including hiring of additional FTEs since the financial crisis, significantly increasing costs. Wealth Managers were no exception to this, given the need for quick results to avoid legal fines and to adapt to changing regulation.

A large number of compliance processes is repetitive in nature with pre-set decision criteria that can be codified and automated. Examples of such processes include report generation, data and database management as well as risk measurement and reporting.

So far traditional Wealth Managers are struggling to reap the benefits of process digitisation. Financial technology companies provide examples of how to use digital capabilities to enhance control function processes, such as the use of machine learning to optimise credit and fraud modelling or cognitive computing for real-time KYC / AML solutions.

In the context of financial crime transaction monitoring, traditional human file analysis can be linked with machine learning to reduce "false positives". Vended solutions for transaction monitoring often produce a large number of false positives. Especially the AML operational investigation process tends to be very resource-heavy, but improved calibration/ advanced analytics can deliver impressive reduction of false positives. Use cases show benefits of 20-40% reduction in false positive rates.



Collaborating with or acquiring financial technology companies may prove to be an attractive opportunity to ensure the rapid build-up of relevant digital capabilities.

# Effective prioritisation of digital investment opportunities is a key lever to improve digitisation success rate

Common obstacles such as legacy infrastructure, challenges in attracting digital talent and governance continue to weigh hard on the long-term success prospects of Wealth Managers' end-to-end digitisation. These obstacles are emphasised by Wealth Managers' difficulties in prioritising high-impact digitisation projects and efficiently allocating investment budgets. Digitisation of key value chain steps that result in the largest cost and complexity reduction need to be prioritised. To avoid the delivery risk of "big-bang" transformations, we suggest for Wealth Managers to decompose digitisation targets into component parts. Instead of trying to digitise the entire value chain at once, Wealth Managers should focus on individual parts, where objectives can be achievable in weeks or months, not years. Iterative approaches like agile can be leveraged to make progress more visible and build momentum towards change.

While many operational processes can benefit from technology enablement, a systematic prioritisation is critical for maximising return on investment. To identify, assess and prioritise the highest-impact digitisation projects, we suggest the setup of a central Digital Competence Centre (DCC). The DCC's role is to consolidate, assess and prioritise digitisation ideas across the entire organisation. Digitisation business cases compete against each other for resources and funding. An independent team of digital experts in the DCC serve as the evaluators from a holistic organisational standpoint. For every launch of a new initiative by a Wealth Manager, we expect dozens of ideas will have been evaluated and tested.

Digital business cases

Digital Competence Centre

1 Evaluate

2 Prioritise

Figure 33: Digital initiative evaluation and prioritisation mechanism

With the DCC as a central contact point, digital initiatives are coordinated more efficiently, avoiding duplication and connecting business units with similar undertakings.

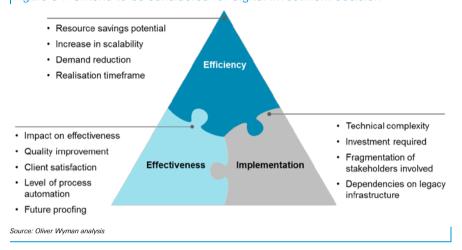
Digital opportunities must be assessed both in terms of their efficiency and effectiveness potential as well as their implementation effort. Business cases

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with the highest expected return from an overall organisational perspective must be identified and prioritised. This holds true whether digital opportunities create revenue potential through an improved value proposition (e.g. via improved quality or client satisfaction) or bottom-line gains through reduced operating costs or increased business scalability. Such an approach forces decision makers to clearly define their expectations and goals associated with digital investments.

Figure 34: Criteria to be considered for digital investment decision



Funding and resources must be provided based on systematic progress, similar to venture-oriented start-ups. Regular follow-ups by the DCC ensure results are measured early-on, projects are delivered within reasonable time and rapid course-correction is undertaken, if necessary.

#### When digitisation efforts face a legacy culture in the business areas

Digitisation efforts in traditional organisations often meet a legacy IT culture and face difficulties in getting buy-in from senior management and business areas, which in turn leads to lower success chances of digitisation efforts.

There are a number of key variables to ensure senior management and business area buy-in and commitment. Firstly, while the DCC contributes with expertise, the responsibility to develop and (co-)deliver digitisation ideas needs to remain within business units in order to foster a culture of ownership and sense of urgency. Furthermore, the organisation's digitisation objectives need to be formally manifested in employee's job descriptions. Key performance indicators reflecting the Wealth Manager's strategic, but also operational digitisation objectives (e.g. number of business processes digitised) must be detailed in staff's performance objectives.

This overall prioritisation and incentive approach sets out digital governance structures and allows for rapid course-correction in response to evolving customer expectations, competitive movement and regulatory changes.



#### 2.2) Drive Alternatives penetration

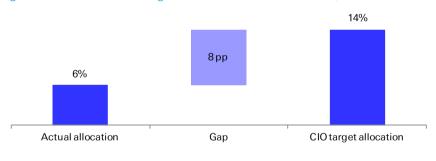
# Increasing Alternatives penetration represents a win-win opportunity for HNW clients and Wealth Managers

We estimate that at current average fees, a 1 percentage point increase in Alternatives penetration results in a proportionate increase in fee revenues. This represents a significant opportunity for Wealth Managers.

Increasing Alternatives in portfolio allocations benefits both clients and Wealth Managers. While clients benefit from risk diversification and enhanced expected returns, Wealth Managers will see increasing revenues, reduced client attrition rates and lower AuM volatility due to longer lock-up periods. Our research also indicates that a high quality Alternatives offering can lead to net new asset generation, with clients moving currently unbanked assets back into the ecosystem or consolidating assets with providers.

Alternatives allocations increased across regions in recent years, with clients searching for returns in a historically low yield environment. Our research indicates that there is still significant upside. Alternatives penetration would need to more than double to today in order to achieve CIO targets – this holds true across regions. CIO portfolios indicate a target allocation of 14%, actual client portfolio penetration is 8 percentage points lower. This represents a ~US\$ 5TN AuM gap.

Figure 35: Actual vs. CIO target Alternatives asset allocation, % of total AuM



Source: Oliver Wyman analysis

# Demand and supply side challenges need to be addressed to increase Alternatives penetration

On the demand side, main challenges are product characteristics such as illiquidity and high investment thresholds. Our HNW client survey reveals that a majority of investors in the US and Europe are not willing to lock up more than US\$ 250K in a single Alternative investment.

On the supply side, limited access to high-quality Alternative assets and insufficient advisor knowledge are major challenges. Supply of high quality Alternatives is constrained and competition for access with the traditional institutional investor base is fierce, especially for those managers with a long-standing positive track record. This is even the case for large Wealth Managers.

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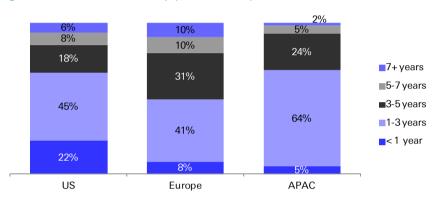


### Wealth Managers will need to address illiquidity and high investment thresholds

Select UHNWIs and Family Offices may have the option to directly invest in Alternatives. However, high initial investment thresholds typically prevent HNWIs from going direct.

HNWIs usually dislike the long lock-up and draw-down periods for Alternatives. According to our HNW survey, more than 40% of clients across regions are not willing to commit capital for longer than three years. Often limited NAVs and lack of overall reporting during the investment lifecycle further add to client concerns.

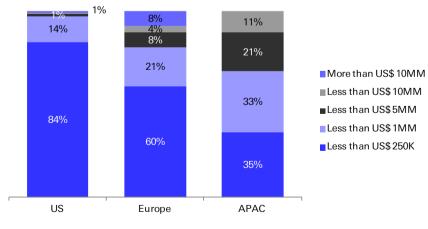
Figure 36: Max desired lock-up period for illiquid investments



Source: Oliver Wyman HNW client survey 2017

High investment thresholds represent the key challenge to HNWls. Most Alternative products require significant upfront commitments. According to our HNW survey, a majority of respondents from the US and Europe are not willing to lock up more than US\$ 250K in any single Alternative product. This is less of a constraint in APAC, where approximately two thirds of clients would make single investments of over US\$ 250K.

Figure 37: Max investment in a single Alternative product



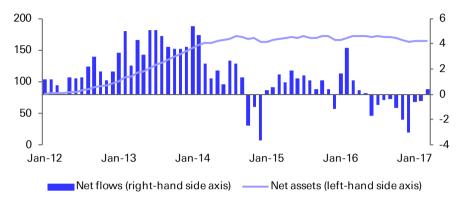
Source: Oliver Wyman HNW client survey 2017

Liquid Alternatives mutual funds, once seen as a potential solution to overcome these product challenges, have not proven to be an attractive



substitute. In the US, asset levels in liquid Alternatives have plateaued for three years and recorded their first year of net outflows in 2016.

Figure 38: US liquid Alternatives mutual funds development, net assets and net flows, in US\$ BN



Source: Morningstar, Oliver Wyman analysis

Note: Includes the following Morningstar mutual fund categories: bear market, long-short equity, long-short credit, managed futures, market
neutral, multi-alternative, multicurrency, and option-writing

Performance is the major, but not the only reason. Funds have produced negative returns on average. Many liquid alternative funds have not succeeded in increasing diversification and reducing volatility. This is due to the fact that the majority of liquid alternative funds are correlated to the assets that investors want to diversify.

# Limited supply and access to high-quality products are the key supply side impediments to Alternatives growth

Supply of high quality Alternatives is constrained and even for large Wealth Managers access is limited. Competition with Alternative asset managers' traditional institutional investor base for access is fierce, in particular for those managers with a long standing positive track record. From an Alternative asset manager's point of view it is less complex to welcome traditional institutional investors compared to Wealth Managers, who oftentimes need to run through a lengthy new product approval process.

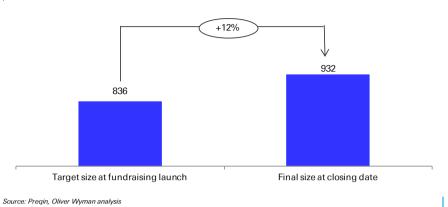
Current global supply of Alternative assets falls significantly short of total demand if penetration levels were raised to CIO targets. At current HNW AuM levels, the CIO target allocation is US\$ 1.4TN larger than total global AuM of Alternative asset managers. The real supply gap is even larger as only a subset of supply fulfils the due diligence criteria Wealth Managers would generally apply. In particular track record and minimum manager size will significantly lower the in scope supply for most Wealth Managers.

Private equity managers try to meet increased overall demand by frequently raising fundraising targets. At the same time, increasing supply threatens to erode the historically higher return profile of Alternatives compared to traditional asset classes.

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Figure 39: Target vs. final size of private equity funds, in US\$ BN, sample of 1,200 funds raised since 2012



Record-high levels of dry powder among private equity funds indicate a lack of attractive investment opportunities for Alternative asset managers in the present market. This will lead to a slowdown in new product issuance until dry powder levels are adjusting as committed capital is drawn down.

# Advisor training and incentive schemes are another hurdle to Alternatives growth

Advisors still hesitate to discuss Alternatives with clients as shown in our HNW survey results. Advisor training is key to reverse this. Legacy incentive schemes that often still reward transactional revenues and AuM turnover over draw down products with longer lock up periods further slow client adoption.

Wealth Managers need to establish a pipe into leading Alternatives Managers, provide solutions to the illiquidity challenge and adapt their sales process to win in Alternatives

Wealth Managers who want to grow their Alternatives business need to focus on three main areas of the value chain: access, product structuring and distribution.

Figure 40: Focus enhancement areas within the Alternatives value chain



Source: Oliver Wyman analysis

#### Ensure best-in-class sourcing process to access high-quality Alternatives

Strategic relationships with best-of-breed Alternative asset managers need to be established. A high quality, yet manager friendly new product approval process (e.g. due diligence, related seed capability and commitment processes) can help position vs. the managers traditional institutional client base. Accessing best-of-breed Alternative asset managers will also help alleviate client concerns on performance and fees.

#### Tackle illiquidity and concentration risk through innovative product structuring

To fully capitalise on the client demand, solutions to address illiquidity and concentration risk need to be designed. Embedding Alternatives as a standard



component in Discretionary mandates can go a long way already. In addition, feeder structures with secondary market features can increase direct client investments and represent additional revenue opportunities to Wealth Managers at the same time. Furthermore, the creation of in-house secondary markets within the Wealth Manager, possibly also on a peer-to-peer basis, can alleviate the liquidity issue.

#### Educate advisors and provide specialist support

Wealth Managers must ensure advisor training and rethink their incentive schemes to remove prevalent barriers to distribution. Wealth Managers need to increase advisors' level of comfort with Alternatives and provide specialist product support. Advisor incentive schemes must be adjusted to appropriately reward draw down products with longer lock up periods.

#### 2.3) Win in emerging markets

#### AuM growth will be dependent on success in emerging markets

Emerging markets continue to be a key growth driver for the Wealth Management industry. Emerging Asia has seen double digit annual AuM growth in recent years, mainly driven by Mainland China. Other regions, in particular the Middle East and Latin America have seen slower AuM growth as commodity prices declined and local currencies devalued. However, we expect broader emerging markets growth to resume going forward as commodity prices have stabilised. We estimate that ~60% of AuM growth will stem from emerging markets over the next five years.

To meet ambitious AuM growth targets set out by the industry, global Wealth Managers will need to review their game-plans to capture onshore emerging markets growth.

#### Onshore growth will outpace offshore growth

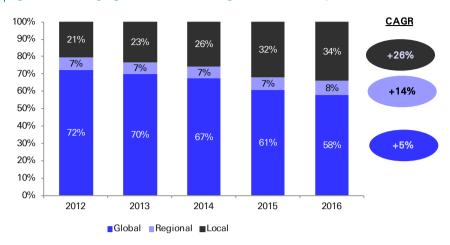
Historically, most emerging markets saw a large proportion of their AuM being managed offshore. The majority of future growth will originate in onshore markets. This is particularly true for regions disproportionally impacted by the second wave of regularisation, such as Latin America and South East Asia. Also the Middle East is increasingly focusing on developing onshore financial centres and as a result limiting offshore flows.

Local and regional players show early success in growing their onshore platforms, while global players are facing the challenge of how to win onshore. Global Wealth Managers have a strong position in the offshore hubs serving emerging markets, but with few exceptions, have struggled to find a winning formula onshore. On the other hand, their local and regional competitors, mainly domestic retail and commercial banks have always focused on onshore clients and can expand on that positioning.

In emerging Asia for example, the universal banking onshore model combined with the build out of affluent and core-HNW Wealth Management offerings resulted in annual AuM growth rates of more than 20% for local players in the last five years. On the other hand, global Wealth Managers only saw 5% p.a. AuM growth in emerging Asia, resulting in a significant loss of market share.

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Figure 41: Emerging Asia Wealth Managers' AuM development



Source: Asia Private Banker, Oliver Wyman analysis
Note: Based on a sample of the 30 largest Wealth Managers; only includes Wealth Manager that publically report AuM for their Wealth
Management divisions

Some local Wealth Managers in emerging Asia have seen an even steeper growth trajectory and achieved growth rates of above 50% by focusing on single niche segments, such as private equity investments in China. These highly successful local players usually combine a narrowly defined client segmentation and targeting strategy with successful digital distribution channels.

While onshore will outgrow offshore in emerging Asia, some regional players, particularly those with an advantaged home base in offshore centres, have been able to take advantage of global players' retreating through the acquisition of their offshore books. Even though a large proportion of their growth was driven through acquisitions, these players still have managed to grow ~10% organically.

In Latin America, local Wealth Managers continue to dominate the market as most global players were never able to establish a significant onshore footprint. In the Middle East onshore growth is mainly driven by government ambitions to build out local capital markets and restrictions for offshore businesses.

## Competition increases for global players and several decided to exit emerging markets

Only a select group of Wealth Managers with significant scale managed to build a sizeable onshore business in recent years. As a result of offshore pressures, a number of global players changed their emerging markets focus to UHNW clients only, where their global proposition is comparatively stronger. Others, recognising their lack of scale, have revised their strategies and exited. Transactions were largely focused on players with less than US\$ 20BN in AuM, which has historically been the minimum platform size for successful emerging markets businesses.

## We expect the minimum platform size for successful regional emerging markets platforms to increase to ~US\$ 30BN by 2020

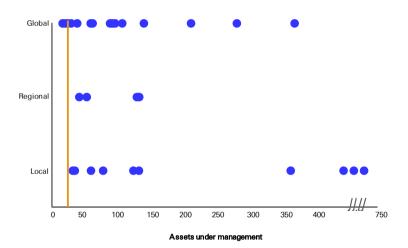
We estimate the minimum platform size to succeed within one emerging markets region to increase to US\$ 30BN. Lower earnings capacity on AuM and high salary costs are the main drivers for the increased platform size requirement.



Continued fee pressure and competition are lowering earnings capacity on AuM and most markets have not yet developed a sufficiently deep local talent pool of advisors. As a result, senior advisors are often paid up to 50% more than in developed markets. We expect the higher advisor costs to remain in place over the next years, in line with continued expected growth and hence new advisor demand. Emerging markets also face increasing demands from a regulatory perspective. Many regulatory requirements increase operational complexity and drive up staff count in the short term.

Absent any significant business model changes or transactions, we estimate that many Wealth Managers in emerging markets will remain below the minimum platform size. In emerging Asia, ~30% of global Wealth Managers are estimated to remain below the minimum platform size in 2020. As a result, we expect consolidation to continue in the next years.

Figure 42: Forecasted 2021 AuM of top 30 Wealth Managers in emerging Asia in US\$ BN



Source: Oliver Wyman analysis Note: AuM growth rates based on historical growth for different categories

#### Winning onshore will require new business model approaches

Winning onshore will require substantially more than hiring advisors and boosting marketing spend. Client demands are getting more and more sophisticated. Leading players, all local, regional and global, will need to:

Turn transaction relationships into advisory relationships: Wealth Management clients in emerging markets are to a large extent self-directed. Our survey of Asian HNW investors for example highlights that only ~30% want an advisory relationship vs. more than 50% in Europe / US. Other emerging markets are more receptive to advisory based relationships, but they come with their own specific local preferences, such as hedge fund demand in Latin America. To win onshore in emerging markets, global Wealth Managers will need to adapt to local client preferences. Simply offering the existing solutions that are on the shelf for offshore clients will not be sufficient. In addition, Wealth Managers have to decide if and how they want to serve self-directed investors that are more common in emerging markets.

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- Address both financial and non-financial assets: Entrepreneurs, accounting for ~60% of wealth in emerging markets, are a key strategic client segment for global Wealth Managers. However, Wealth Managers have mainly focused on their investable assets so far neglecting their non-financial assets such as private company holdings or real estate portfolios. To win in emerging markets onshore, global Wealth Managers will need to address the clients' non-financial assets as well. Especially the wealthier entrepreneur clients want wealth to be a part of a broader corporate advisory relationship. This requires banks to link Wealth Management and Corporate Banking services even more closely.
- Ensure relevance to the next generation: Digital advisory offerings are required to keep the bank relevant for the next generation. Already today, ~40% of Asian clients would prefer to communicate with their advisors by using social messaging similarly high digital adoption rates can be observed in Latin America. For the next generation, we expect digital channels to be even more important. If Wealth Managers want to stay relevant, they need to rapidly build out their digital capabilities.
- Partner with local Wealth Managers and/or grow through acquisitions: Especially smaller global Wealth Managers have to adopt more creative approaches to participate in the onshore growth. One such approach is through partnerships with local Wealth Managers. Local players' can enhance their value proposition by providing access to global Wealth Managers' overseas investment capabilities. In return global Wealth Managers gain access to clients which they would normally not be able to serve through their existing distribution channels. This approach has proven successful for a few players in the market already. A second approach is to consolidate assets from retrenching global Wealth Managers to gain scale quickly. Mainly regional Wealth Managers have pursued this opportunity so far, but we expect select smaller global Wealth Managers to pursue this strategy going forward as well.

## 2.4) Rethink collaboration approaches

Wealth Managers need to rethink their approach to internal collaboration models

We still see a strong untapped potential to capitalise on revenue synergies by re-evaluating collaboration and integration models between Wealth Management units and other bank businesses. Universal banks in APAC are already ahead of their European and US peers in having integrated banking units; the US in particular faces the toughest challenge given Wealth Management units are typically still run as standalone businesses. US HNW clients who have a broader relationship with the bank state that only 19% of these relationships emerged due a referral from the wealth manager.

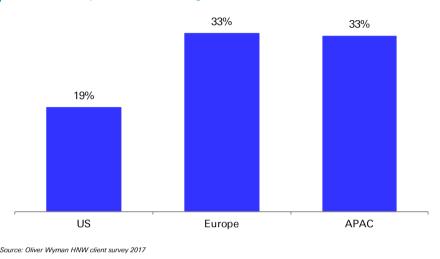
Current initiatives to improve collaboration between Wealth Managers and other banking units indicate a scattershot approach with limited or sporadic success

Most integrated Wealth Managers have already implemented cross-business unit collaboration based on revenue sharing agreements or formalised referral



models. For example, banks encourage their commercial bankers to refer clients to the wealth manager. A typical commercial banker has 5-10 strong HNW relationships. Even at 20-30% conversion rates, 1-2 new clients per commercial banker is not a particularly scalable growth model. Similarly, banks have been working on referrals from investment bankers, where similar scalability challenges exist.

Figure 43: Percentage of banking relationships within the same institution that were referred by the Wealth Manager



We see significant un-tapped collaboration potential through Workplace Banking and Wealth Management solutions for large corporates and their employees

Wealth Managers need to translate their parent banks' institutional relationships into referral channels at large employers by establishing themselves as the preferred provider of comprehensive banking and Wealth Management services for their employees. Such Workplace Banking offerings are increasingly common in Asia with Wealth Managers typically using retirement products as the entry point and expanding to other product offerings from there. We believe that the business case and value proposition can be extended to other markets as well. A handful of global players have begun to explore such initiatives.

The corporate can position such services as an employee benefit – since the terms are more favourable than what they would be able to get on their own – and the Wealth Manager can leverage the exclusive brand access to build new banking and Wealth relationships. Workplace banking programs allow the Wealth Manager to get in early and offer a more comprehensive financial wellness offering, including for mass affluent clients.

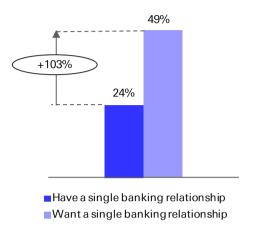
In the US alone, we see a US\$ 350-700BN AuM opportunity if Wealth Managers could penetrate 5-10% of HNW prospects at the largest corporates.

Preferential pricing and differentiated service levels as part of Workplace Banking can help consolidate client assets

Our primary research suggests there is demand across regions from clients wanting to consolidate their core banking relationships at a single institution. Of those HNW investors with multiple banking / investment products, at least half would ideally have a single relationship.



Figure 44: Percentage of HNW clients that have vs. want a single banking relationship1



Source: Oliver Wyman HNW client survey 2017 1. For those HNW respondents with multiple banking relationships

The industry has so far failed to consolidate client wallets, given only 24% of clients actually have a single banking relationship. Preferential pricing and service levels as part of Workplace Banking arrangements can act as a differentiator to other Wealth Managers. Discounting could be based on the depth of relationship with the Wealth Manager, which would simultaneously encourage clients to consolidate current products and explore new ones. Differentiated service could be delivered through dedicated corporate client issue-resolution channels (in-person and over the phone), higher allocated adviser time and access to a wider range of subject matter experts. Greater consolidation would also reduce client attrition - the more products a client has concentrated with a single Wealth Manager, the stickier the relationship and hence the revenues.

## 2.5) Adapt advisory models

Advisory models need to be adapted to capture evolving client needs representing 39% of global wealth

As technology innovations become mainstream and client preferences change, Wealth Managers need to revise their value propositions to retain and possibly grow share of wallet. Our research indicates that clients are looking for greater flexibility than ever in how they manage their money and how they engage with their Wealth Managers. Large groups of HNW individuals don't fit neatly into traditionally defined investor segments, nor are their combined preferences always self-evident.

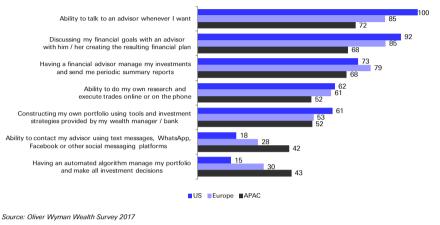
Across regions, HNW individuals value access to an advisor above all other considerations, whether for extensive goal-based planning or simply to test ideas. We see a higher proportion of individuals in the US looking for online brokerage-style capabilities such as independent trading and the ability to build portfolios. In Europe, a greater percentage of clients prefer delegated mandates.

APAC HNW survey respondents are less skewed in terms of their overall preferences, instead preferring a wider range of attributes including digital



functionality and communication channels. In fact many of the starkest regional differences are in preferred digital capabilities, with US HNW investors typically the least and APAC HNW investors the most demanding.

Figure 45: Selection of key Wealth Manager attributes, by region – preferences scaled from 0-100

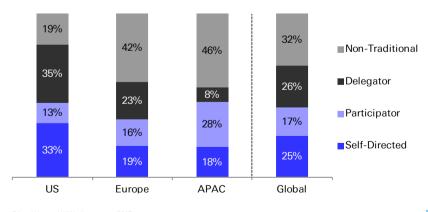


However, these broad preferences mask numerous regional sub-segments, often with much more explicit and contrasting value drivers.

Wealth Managers need to satisfy non-traditional client needs, selectively build out automated investment management products and make targeted investments in digital capabilities and communication channels to stay relevant going forward

Our primary research indicates that up to 32% of clients representing 39% of global wealth do not fit neatly into the archetypes associated with Wealth Managers' traditional offerings (self-directed, participator, delegator).

Figure 46: Percentage of HNW respondents by Wealth Management archetype



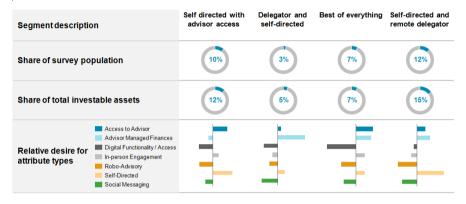
Source: Oliver Wyman HNW client survey 2017

We observe a wide spectrum of client profiles. These include clients who value advisor access to help them do better as a self-directed investor, clients who want to somewhat interact with their advisors but still delegate, and clients who appear to want the best of everything. The last group of clients values the



ability to trade of their own accord, but also want to delegate managing part of their portfolio to an advisor or even an automated investment management product.

Figure 47: Wealth Manager attribute preferences of non-traditional client segments



Source: Oliver Wyman HNW client survey 2017

These non-traditional clients are currently working with multiple Wealth Managers or are simply in products which are ill-suited to them. This inevitably undermines client engagement and thereby reduces revenue-generating potential. Building out relevant offerings is key to capturing a disproportionate share of these clients.

Wealth Managers must develop more 'flexible' value propositions, allowing clients to select the elements they prefer from across the institution's full range of capabilities

Such bundling will require new and equally flexible pricing arrangements. For example, for a client who generally prefers to delegate investment decisions but occasionally wants to trade with her advisor's input, Wealth Managers could simply waive trading commissions and only charge her on her fee-based assets, to encourage and empower the individual. Another way of structuring this would be to credit the trading commissions generated towards the client's asset-based fees.

Pricing for digital vs. in-person access is a harder problem. The key constraint here is advisor time, which is a scarce resource and impacts individual productivity. One approach could be to not differentiate pricing based on the degree of in-person access a client requires – since the value proposition is much broader than that – but solve for the supply side by managing advisor books to ensure they have a good mix of clients they feel comfortable serving.

Another under-served HNW client segment is looking for Wealth Management solutions which combine traditional in-person advice with a more dynamic asset allocation model that can monetise market volatility

We see an opportunity for Wealth Managers to rethink their CIO models. Historically, CIO portfolio allocations were based on quarterly macro views which were then trickled down into advisory mandates or to advisors for implementation in transactional accounts. This approach not only fails to benefit from intra-period market trends, but it can also be slow to implement. Wealth Managers should design products that re-allocate assets based on



frequently updated CIO world views. CIO teams need to be more actively involved in client discussions, particularly around political or other events, showing clients how they can tilt their portfolios. Select players have had recent successes on this front around Brexit and the US presidential election. Such products will require additional resources to continuously update asset allocations, as well as traders with inter/intra-day risk management expertise.

Taking one step further, such models can also be adapted to dynamically translate clients' market views or even personal values into trading strategies. This would require advisors to assess clients' risk appetite and trading preferences at a more granular level. Different asset-based pricing points could be established to reflect how resource intensive each strategy is.

Such a model could simultaneously drive greater client engagement and satisfaction and generate higher client returns. In contrast to Investment Banking units, Wealth Managers' trading revenues are not correlated with market volatility, though select players have bucked this trend. As HNW investors become more financially savvy and active, Wealth Managers must cater to those looking for a more dynamic trading model. With tools designed to translate client preferences into trading strategies, advisors can more effectively and efficiently generate trade ideas for their clients.

## Demand for robo-advisory products among HNW clients in the US and Europe is limited

Wealth Managers investing significantly in such technology with the hope of driving new HNW client acquisition will likely be disappointed. There is however appetite among mass affluent clients. Robo-advisory products could still serve as an entry into a broader value proposition and help drive future WM client acquisition, contingent on the Wealth Manager's ability to execute on the promise. In the US, 14% of mass affluent clients representing US\$ 1.4 TN or 4% of total US investible assets are expressly looking for an automated investment management product.

In APAC, where HNW clients are younger and more tech-savvy, almost one third of investors – accounting for 33% of HNW wealth in the region – are looking for an automated investing solution. As these products become more sophisticated and the HNW investor base more familiar with them, this number is likely to increase. For Wealth Managers in the region offering these products is table stakes. There are a number of options they can pursue to offer these products, including partnerships or in-house development.

# Wealth Managers must identify and invest in digital capabilities that are relevant for specific client segments

As with digitisation initiatives targeting operational efficiency, we find that Wealth Managers have applied a broad brush approach to digital investments on the client side, resulting in mixed results and wasted investments. There are innumerable capabilities Wealth Managers could implement in this space, but only those tailored to address known client needs will improve current client engagement and drive new client acquisition.

Our research shows that 'digital' does not mean all things to all people. Almost 40% of Asian investors highlight the ability to communicate using social messaging as the most important consideration, and they place much less value on other digital functionality such as online financial planning or portfolio construction tools. These clients are 'stock-pickers', largely looking for

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investment recommendations and subject matter expertise to inform their trading, with social messaging providing the quickest and most convenient way to facilitate this. In contrast, US and European HNW investors have almost no interest in social messaging, yet 29% and 8% respectively value real-time visibility into portfolio performance on smartphones and using tools for financial goal-setting - Wealth Managers should focus their investments accordingly in these regions.

Wealth Managers who refine and create new value propositions corresponding to non-traditional client needs, selectively invest in automated investment management products and make targeted investments in digital capabilities and communication channels will see an improved client experience resulting from better resource allocation.

# 2.6) Capture value sources beyond today's Wealth Management ecosystem

### Wealth Managers should prepare for a more modularised world in the future

The shape of both supply and demand are shifting across the Wealth Management industry, creating new ways to serve changing customer needs and expectations. Digitisation makes it dramatically easier to plug-and-play services from multiple providers into a seamless client experience.

Most Wealth Managers still run a fully integrated model, owning components along entire value chain. The integrated model is not going to disappear in the short-term. However, it will become less defensible in light of digitisation and the industry will become more modularised with a diverse set of providers for different steps of the Wealth Management value chain.

Wealth Managers will need to make clear choices about their future position in the Wealth Management value chain. It is improbable that each Wealth Manager will be able to be the best across the entire value chain, and sustain the level of investments required to win in every field. Hence, Wealth Managers need to make choices on where to compete.

Capabilities, investments and the entire operating model will need to be aligned with that choice. In some cases, this will mean offering competitors' products and services. In other cases, it may mean exiting businesses or certain operations.

# Wealth Managers can gain inspiration from the tech industry to think of ways to generate real and sustainable growth in a modularised world

Modular ecosystems have been existent in the tech industry for a long time. Firms usually succeed by focusing on a particular role in an ecosystem and building up specialised advantages. For example Apple focused on being the standard-setter for engaging experiences on edge devices – iPhone, iPad.

In this section we describe three potential future business model choices for Wealth Managers in order to build and sustain new value sources given revenue growth levers in the traditional vertically integrated Wealth Management value chain have a natural limit.



Figure 48: Evolving business model choices to capture new value sources

Business model choice	Value chain location	Typical activities	Potential Wealth Manager opportunity
Demand aggregator providing unique, edge client experience	Client platform	Maintain consolidated client view	<ul> <li>Monetise access to clients through select third party relationships</li> </ul>
		Provide interaction and communication channels with clients	Monetise strong brand to provide additional client services, e.g. cyber security, online privacy
		<ul> <li>Advise clients</li> </ul>	
Platform provider connecting ecosystems	Data and infrastructure	<ul> <li>Broker products, services and processes</li> </ul>	Monetise non-bankable assets, e.g. private market platform for all non-bank intermediated
		Ensure standardisation assets	assets
		Provide specialised data or analytics	<ul> <li>Monetise existing infrastructure, e.g. investment platform and engines, compliance tools, financial crime analytics</li> </ul>
Component supplier providing specialised products & services	Financial products and services	Provide specialised services	Monetise best-in-class products and services, e.g. asset management

Source: Oliver Wyman analysis

Wealth Managers can act as demand aggregators and monetise their client relationships outside traditional Wealth Management services.

Demand aggregators differentiate by providing an all-encompassing client experience centred on individual needs. They benefit from their large number of client relationships, wide-ranging distribution reach and access to client data, such as credit quality, source of wealth and life cycle stage.

In the tech industry, Amazon is a textbook example for a demand aggregator. Amazon started off by only selling books online. Once Amazon had reached a large base of loyal customers, it moved from an online bookstore to providing their clients with a vast range of products – originally not part of their core product offering. They have bundled clients' demands in one single store and exponentially increased their value creation.

As demand aggregators, Wealth Managers would continue to own the client relationship and guide clients' buying decisions, for example through holistic financial advice and planning. Demand aggregators would then move to integrate non-banking products and services that improve the overall client experience.

Wealth Managers who act as demand aggregators will be able to address a wider range of client needs typically not covered by banks, e.g. cyber security or lifestyle services. Integrating these select non-banking offerings will represent a new revenue opportunity to Wealth Managers.

# Wealth Managers acting as platform providers could create quasi monopolies for individual parts of the value chain

Platform providers are characterised by having a set of distinct and standout capabilities that can be capitalised by making them available to the broader market. For example, Wealth Managers that have an edge in processing large amounts of data and transactions can embrace opportunities to facilitate interactions between clients and suppliers. This is particularly relevant for capabilities that are standardised.

A well-known example from the tech world is Uber. Uber is a ride-hailing application company operating in 500+ cities worldwide. It offers a single platform that responds to clients' growing demand for on-demand services



and hyper-personalisation. Uber has created a ride-hailing platform that relies on partners and allies in mapping, payments, communications, and even the vehicles themselves to produce the whole solution.

Wealth Managers that aspire to become platform providers will likely already have products, services or processes that are standardised, automated and best-in-class. For example, Wealth Managers could open up access to their clients Alternative assets through a platform. This could evolve into an industry-wide peer-to-peer secondary market platform and would be a solution for Wealth Management clients to solve illiquidity issues.

Successful platform businesses can be very valuable, but are also still rare. The success formula typically begins with "viral" adoption from highly-committed clients, which then stimulates others to join and allows the platform provider to build adjacent services that in the long run lead to network effects.

## Wealth Managers with differentiated products and services can shine as component suppliers

Component suppliers differentiate by owning best-in-class products and services that plug into a range of industry processes and client experiences. This archetype is most attractive for Wealth Managers with superior niche products and capabilities.

Salesforce is a well-known example from the tech industry. Salesforce has built out its business around digitising sales and marketing and making it available as a plug-and-play offering (via software-as-a-service, delivered via the cloud). It targets organisations with significant sales and client relationship management needs with easy-to-install, customisable CRM solutions that integrate well with related tools and data.

Wealth Managers adopting a product manufacturing focus seek to maximise value by ensuring their products are best-in-class, and capable of serving as many client needs as possible with lowest total cost and cycle time. Wealth Managers following the route to become component suppliers can succeed by unbundling themselves from distribution and supplying products to a broad range of distribution franchises.

Success as a component supplier hinges on the ability to manufacture consistently high quality product outside of mainstream offerings that all integrated Wealth Managers produce in house. In this they will face strong competition by both Asset Managers and Investment Banks.



# Appendix 1

## **Important Disclosures**

## \*Other information available upon request

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### Equity rating key

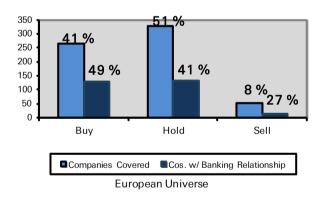
Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield), we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total shareholder return, we recommend that investors sell the stock

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

Newly issued research recommendations and target prices supersede previously published research.

### Equity rating dispersion and banking relationships



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### Additional Information

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