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Our experts offer a bespoke range of cloud and on-site deployment options to make your business more agile, scalable and responsive to industry change.
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Our annual Technology and Operations Trends in Wealth Management Report is one of the highlights of WealthBriefing’s regular research output. It is intended to serve as both a useful benchmarking tool and to provide signposts to where technology use is trending in the industry. The diverse set of senior executives contributing to our commentary, along with a survey covering all major markets, give this report global significance.

As ever, assessing the impact of regulatory pressures forms a foundational part of this study as these have been and continue to be a leading driver of technology change in the industry. Regulators globally have been pursuing very broad agendas spanning consumer protection and corporate/industry culture, through innovation and robo-advice to cyber-security and financial crime. The result is that the number of updated or new regulations that globally-active financial institutions must track every day is said to have tripled since 2011.

The cost implications of meeting this onslaught of new or tightened rules have been huge, forcing firms to seek efficiencies as a matter of urgency. It is commonly forecast that compliance will soon eat up 10% of revenues for some unfortunate firms (costs standing at 4% in the main now) and that regulatory fines will have hit US$400 billion globally by 2020 – figures which will have undoubtedly convinced many wealth and asset managers to make significant technology upgrades.

This report aims to investigate just how enthusiastically wealth managers are embracing new fintech solutions to cut down on costs and relieve pressure on resources, and the degree to which they are opening their minds to alternative models like cloud technology and hosted solutions, as they eye a multiplicity of risks.

The regulatory overhauls and generational changeover of wealth that are both upon us mark an inflection point for the industry. The need to maximise automation, in order to reduce costs, increase efficiency and speed up processes, and to simultaneously complete the transition to a “digital first” organisation has made technology investment non-negotiable. Innovations around data management and digital delivery channels are top of the agenda, and just one example is how organisations are turning to automation to help improve the quality of data and remove any gaps that might incur censure.

Where once the industry was generally quite tech-shy, now wealth managers increasingly look towards the cutting-edge in both behind-the-scenes operations and client-facing senses. According to our recent study of the issue, 54% of wealth and asset managers are already investing in Artificial Intelligence technology, with a further 23% interested in doing so. Exploring the likely direction of technology travel for wealth and asset managers has correspondingly become an important part of this annual report, particularly as regards the individual motives for innovation moving firms.

We hope that readers enjoy this latest edition of our most wide-ranging report, and find it to be informative and useful for both specialists and non-specialists alike.

WENDY SPIRES
Head of Research
WealthBriefing
PAUL BEBBER
REGIONAL SALES DIRECTOR, SS&C ADVENT

Paul joined Advent in 2013 and is the regional sales director, responsible for sales and business development in the institutional fund management and wealth space for the UK, Switzerland and Central European region. Paul has over 20 years of sales experience in the financial services industry. Having started his career working in fund accounting, treasury management and fund management support, he has a clear understanding of the industry and how it has evolved over the last 25 years.

WENDY SPIRES
GLOBAL HEAD OF RESEARCH, WEALTHBRIEFING; RESEARCH AUTHOR

Wendy has been a wealth management journalist, researcher and consultant for over a decade, covering a huge range of international markets and sub-sectors over that time. Known as a technology and communications specialist, she has written an array of in-depth reports on issues affecting private banks and wealth managers, ranging from compliance and innovation trends through to client experience, branding and marketing strategies. As well as speaking at conferences in both the UK and abroad, Wendy also regularly consults for wealth and asset managers, including carrying out research projects among end H/UHNW clients for both internal and external purposes.
EDITORIAL PANEL

DR ARIEL SERGIO GOEKMEN
MEMBER OF THE EXECUTIVE BOARD, SCHRODER & CO BANK

Ariel is a member of the executive board of Schroder & Co Bank in Switzerland and is responsible for its private banking operations in Zurich which service clients in Switzerland, Germany, the UK, and the Nordic region of Sweden and Eastern Europe/Russia. Ariel supports UHNWI entrepreneurs, families and charities in all financial advisory aspects and beyond, e.g. succession planning, philanthropy and relocation, together with other internal and external experts. Over more than 30 years in the banking sector, Ariel has held various managerial positions and is a regular speaker at conferences and the author of many articles and books on the subject. He is a member of STEP, ITPA, IISS and IFA.

DENNIS HARHALAKIS
INDEPENDENT INDUSTRY CONSULTANT

Dennis is a consultant helping wealth managers and financial services firms become truly client-focused. As a wealth management professional with 30 years’ experience in financial markets, he has performed a number of global and regional management roles, working with clients across multiple segments from Greater China, Southeast Asia, the UK, Europe and the Americas. He lived in Singapore for 13 years and has significant pan-Asian experience. Dennis has worked for American Express Bank, Standard Chartered and ANZ. Before returning to the UK, he was part of a management team that set up a new private bank in Singapore for CTBC, the largest non-public bank in Taiwan.

PHIL NEWBOLD
COMMERCIAL CHIEF STRATEGY OFFICER, KLEINWORT HAMBROS

Phil is the Commercial Chief Strategy Officer at Kleinwort Hambros, part of the Societe Generale group, responsible for building and implementing strategic initiatives throughout the private bank. Prior to the merger of Kleinwort Benson and SGPB Hambros, Phil was a Senior Business Manager at Kleinwort Benson, having joined in 2012. Phil has over 15 years’ experience in financial services, starting his career at HSBC Investment Bank gaining experience in front-office trading systems and equity head product migrations. He has since held several senior positions, specialising in strategy and delivering business, technology and organisational change.

JÜRGEN PULM
HEAD OF PRIVATE BANKING FOR CPB SERVICES, RBS

Jürgen has been Head of Private Banking Services at RBS since the end of 2014. In this role, he oversees IT, banking operations and change management for the RBS private banking entities and is also the CEO of RBS Services (Switzerland) Ltd. Previous roles include being the Chief Technology Officer of the Wealth Management Division of RBS and Head of Technology Trends and Mobile at RBS Group. Prior to that, Jürgen served as Chief Operating Officer of the Wealth Management Division of RBS, as well as deputy head of the management team at its Swiss branch. Before joining the RBS Group in 2006, he served as CIO at Julius Bär Group.
VERONA SMITH
HEAD OF PLATFORM, SEVEN INVESTMENT MANAGEMENT

Verona’s track record spans more than two decades, three continents, major organisations such as Legal & General, American Express and BT Financial, and the complexities of wraps, platforms, as well as associated products and tools. She has settled in the UK due to its variable climate and ever-changing financial services landscape. Verona joined 7IM from the UK’s largest platform, Cofunds. As Head of Platform she leads sales, relationship management and service for the 7IM platform. Since platforms are how people invest, Verona is passionate about getting people excited about investing, or if not excited, at least doing it.

MIKE TOOLE
CHIEF OPERATING OFFICER, ARTORIUS WEALTH

Mike is Group Chief Operating Officer and one of the founders of Artorius Wealth, a wealth manager that has shown strong growth since inception in 2014, operating from UK and Switzerland covering Europe and the Middle East. He has developed an operating model that delivers a multi-jurisdictional, client-centric wealth planning proposition, that is custodian agnostic and is underpinned by a strong governance infrastructure, addressing the associated opportunities and complexities that arise. Previously, he was a partner at accountancy firm Baker Tilly, where he was group operations director for the financial management and investment businesses. Mike has 12 years’ experience in financial services and banking, including with KPMG, Santander and UK mutual societies. He was also involved in founding a Saudi family office and managing a substantial private equity portfolio.

ANIL VENUTURUPALLI
CHIEF INFORMATION OFFICER AND HEAD OF DIGITAL, HSBC PRIVATE BANKING

Anil is the Chief Information Officer and Head of Digital for the HSBC Global Private Banking. Before joining HSBC Anil spent more than 11 years with Deutsche Bank in various senior IT and business roles in the Private Wealth Management business in the US and Asia, and more recently in Europe. His most recent role was the Global Chief Operating Officer, Wealth Management, overseeing strategy, platform architecture, digital and financial performance management. Prior to his time at Deutsche Bank, Anil was as a consultant with BearingPoint/PWC, and before that was a product manager for technology-based surveillance at Mantas Inc. Anil has an MBA in Management Decision Technologies from George Washington University in the US.
TECHNOLOGY CRITICAL TO COMPLIANCE; DATA CAN BE A “DOUBLE-EDGED SWORD”

Some 57% of wealth managers believe that regulatory change will increase even further in speed over the next three years, with 34% seeing the current frenetic pace of change maintained. Just under a tenth (9%) are optimistic enough to believe that the regulatory onslaught will diminish in the near term.

Today, 48% of respondents say that technology plays a critically important role in enabling their organisation to meet its regulatory requirements, against an already high 44% for last year. Notably, no participants believed that technology does not play an important role in compliance today.

Enhancing data management is a top priority for 71% of wealth managers (2017: 70%) and only a negligible 2% say that improving the way that data is gathered, stored and managed is not on their firm’s agenda.

A massive proliferation of data has, however, created risks as well as opportunities, particularly in light of growing cyber-threats.

This year’s study indicates a dramatic acceleration in the uptake of cloud-based technologies in the next three to five years, from an already high base. In our last report, 75% of respondents foresaw increased use, including 11% who predicted a very significant increase. This year, those predicting an increase rose to 84%, with 27% saying that this will be very pronounced indeed.

CONNECTIVITY IS KEY

The proportion of firms looking at changing their systems entirely has almost halved over a year, while the number looking to bolt-on developments to resolve technology pressures has risen from 22% to 35%.

What might be called the “best-of-breed movement” has rapidly gathered pace in recent years and looks set to continue to do so. Last year, 36% of firms indicated that they need multiple technology providers to fulfil their needs, rising from 33% the year before. In 2018, 26% of respondents said that all their requirements are not met by one main provider and a further 15% reported they cannot be said to have a “main” one at all today.

OUTSOURCING ENTHUSIASM GROWING AS CLOUD USE TAKES OFF

Wealth managers are enthusiastically embracing outsourced/hosted technology solutions, with 49% of respondents now saying that their firm is willing or wholly willing to go down this route, against 45% last year. Meanwhile, the proportion dismissing these options has more than halved from 16% to 7%.

Examining what the biggest drivers behind a decision to use outsourced or hosted technology are revealed a broadly similar picture to last year, but also an intriguing reshuffle of firms’ priorities. The desire to improve efficiency remained in the top spot, with the proportion of respondents believing this to be an important factor rising from 76% to 82%. However, the wish to improve service quality (77%) is now tied in second place with the aim of reducing operational risk, rising from 61% (and joint fifth) in 2017.

PORTFOLIO MANAGEMENT A STREAMLINING PRIORITY

Almost half (46%) of firms are using four or more systems to construct, manage, monitor and report on portfolios, with 20% using six or more. Just 6% of respondents said their firm uses one unified system for all these activities.

When asked to identify the top-three areas of inefficiency, compiling investment performance reports, model management and monitoring against investment mandate secured most of the overall votes.

Then, looking at where inefficiencies were felt to be most acute, compiling investment performance reports, rebalancing and initial portfolio construction came out top.

BROADER INVESTMENT OFFERINGS COMING IN

Offering clients a wider selection of asset classes and investment instruments is a priority for 42% of wealth managers, and top of the strategic wish list for a tenth overall.

Drilling deeper into regional trends revealed that those firms with the strongest desire to broaden their investment offering were predominantly based in Asia, particularly Hong Kong and Singapore. UK and US-based wealth managers made up most of the rest of the cohort seeking development in this direction.
AN INDUSTRY OPTIMISTIC ON GROWTH; TECHNOLOGY TO PROMOTE PROFITABILITY

Our survey respondents are generally very upbeat on the sector’s growth prospects, with close to eight-in-ten overall being optimistic for their location and a tenth very much so. High optimism was seen across North America, Europe, Switzerland, the UK and Asia almost in equal measure.

Examining what wealth managers are looking to achieve from technology innovation, enhancing the client experience is way ahead: this secured 23% of the top-three votes (and double those for most other motivators), with only operational efficiency gains coming close in popularity. Of those who saw client experience enhancements as a top-three innovation priority, 58% gave this a number one rating.

BUDGETS BLOWN, ENERGY DRAINED: HOW COMPLIANCE IS PUTTING THE BRAKES ON INNOVATION

In our last survey, 40% of respondents said that budgetary constraints stemming from regulatory change had significantly held back their firm’s strategic IT investments; in 2018, that figure rose to 44%, with close to a fifth (17%) reporting the most severe negative impact.

Meanwhile, this year 61% of participants reported that never-ending compliance change had drained energy at their organisation to the extent innovation had been held back, rising from an already high 47%. Today, over a quarter (27%) see the most severe negative impact on corporate motivation as having occurred.
TECHNOLOGY CRITICAL TO COMPLIANCE; DATA CAN BE A “DOUBLE-EDGED SWORD”

NO RESPITE FROM THE REGULATORY ONSLAUGHT

Weighty additions to the compliance burden have come into play since the release of the last edition of this report, coming from regulatory bodies all over the world, and 2018 is shaping up to be a year particularly fraught with new rules for financial services institutions to contend with.

The European Union has been particularly active, with its Markets in Financial Instruments Directive (MiFID II), second Payment Services Directive (PSD2) and Packaged Retail and Insurance-based Investment Products (PRIIPs) rules all coming into force in January 2018, and its General Data Protection Regulation following in May.

Yet regulators elsewhere are almost just as busy. Also hot on the agenda for the coming years are Hong Kong’s Significant Controllers Register; the United States’ Financial Crimes Enforcement Network Customer Due Diligence Rule; an extension to the UK’s Senior Managers and Certification Regime; and Switzerland’s Financial Services and Financial Institutions Acts – to name but a few sweeping rule changes.

The number of updated or new regulations that globally-active financial institutions must track every day has tripled since 2011 to an average of almost 200 today1. Yet it seems that few in the industry believe that even this year’s frenetic activity marks the absolute high-water mark on global regulatory change.

As Figure 1 shows, 57% of wealth managers believe that regulatory change will increase even further in speed over the next three years, with 34% seeing it maintain its current frenetic pace. Less than a tenth (9%) are optimistic enough to believe that the regulatory onslaught will diminish in the near term.

The cost implications have been immense: in 2017, Boston Consulting Group said pre-tax margins at global wealth managers had fallen from 33 basis points in 2007 to 22.4bps in 2016, largely due to inflated compliance costs.

FIGURE 1
Do you expect the pace of regulatory change over the next three years to...

...DECREASE? 9%
...STAY THE SAME? 34%
...INCREASE? 57%

According to the IFAC, the accountancy industry body, disjointed financial regulations across the world are costing businesses up to US$780 billion annually, spent implementing swathes of rules across different jurisdictions, including setting up separate systems, and hiring staff and external experts. In the case of common standards, companies often have to deal with different interpretations internationally, and it is expected that Brexit will further drive up compliance costs if regulatory conflict ensues between the UK and the EU following their divorce.

HEAVY-LIFTING ENTRUSTED TO TECHNOLOGY

Against this back-drop, it is as to be expected that wealth managers’ reliance on fintech and regtech (see below) continues to increase year on year – both to be able to satisfy an increasingly complex web of international rules and to do so as cost-effectively as possible. Recruitment problems and soaring salaries within compliance have been well documented.

Today, 48% of respondents say that technology plays a critically important role in enabling their organisation to meet its regulatory requirements, against an already high 44% for last year. Notably, no participants believed that technology does not play an important role in compliance.

In a world of ever-changing regulation, and one where wealth managers are trying to drive down costs as well as risks, few

FINTECH
Technology used to support (or enable) the delivery of financial services, often in innovative or disruptive ways. Businesses leveraging new technologies, or whose model relies completely upon them, may be described as “fintech firms”.

REGTECH
Technology created to help financial services firms meet their compliance obligations efficiently, often aiming to simultaneously slash regulatory risks and costs, while upping operational efficiency and improving the client/advisor experience.
would doubt Dennis Harhalakis’ assertion that “technology is the only way to support regulatory requirements dynamically”.

However, while the industry’s reliance on technology to stay compliant is now an accepted fact, this should not suggest that the technology piece is complete – either for wealth managers or technology providers themselves. Rather, we still stand relatively early on in what will be a longer-term development story, according to our experts.

For Paul Bebber, the key to success is a culture of proactive collaboration whereby technology vendors work in close partnership with client teams to jointly understanding business demands. Institutions should also look to leverage the best practice insights a large provider is able to offer. “It should never be underestimated how many clients and prospects a vendor speaks with,” he said. “I would say SS&C Advent is very well placed to offer a holistic view of industry developments and we can often make valuable strategic contributions.”

Institutions may have come a long way in bringing their technology capabilities up to the standard meeting new regulations requires, but arguably few will have fully perfected them. Then there is the test of how they will adapt to new requirements, which may take different directions to those hitherto.

Meanwhile, a plethora of new regtech solutions may have sprung up in recent years, but their longevity remains to be seen. As Dr Ariel Sergio Goekmen observed: “We are just at the beginning and, in my view, a lot of providers are niche. This means the successful providers have yet to prove themselves and stand the test of time.” Finding a long-lasting solution with flexibility built in is naturally a priority. Significant investments are being made, but these must deliver maximum value for years to come. Budgets are not bottomless, particularly given the squeeze on profitability discussed on page 24 of this report.

Interestingly, Bebber observed that as part of this wealth managers are becoming more interested in talking to each other about their technology choices. “We’ve noticed that buying on reputation and solid success has become more of a complementary factor in the buying process this year,” he said. “Increasingly, our prospects are favouring a discussion with like-minded clients as a higher priority than the more standard Request For Proposal (RFP) process.”

As Verona Smith pointed out, more broadly there is a question of how well technology can be made to serve meaning when it comes to compliance (and elsewhere in wealth management operations). Regulators want to know that clients are being well served within a healthy financial system, rather than just having “boxes ticked”; just so, wealth managers will want to obtain actionable business intelligence from their compliance activities as much as possible. Then, there is technology’s role in turning compliance to good purpose for clients themselves, such as by firms using risk-profiling as an education and engagement opportunity.

Another good example of this, according to Smith, is what technology can do with the ex-ante (forecast) and ex-post (actual) cost disclosures required under MiFID II. “It can be easy for technology to get all the data and perform the calculations to ‘tick the regulatory box’, but then you need to present it in a way the customer can understand,” she said. “You need the technology in place that’s going to give you the answer, but then it needs to be coupled with an overlay so that the answer actually means something to the client.”

As WealthBriefing research has long emphasised, it is incumbent on wealth managers to try to get as many business benefits as possible from all the compliance activities they are mandated to carry out, rather than this just representing a dead cost.

Regulatory overhauls may be hugely challenging, but they can also act as strong spur to positive action, the panel pointed out. New requirements to audit data, unbundle costs and rethink client communications will have actually helped many firms refine their strategies for the future, it was said. Similarly, great benefits may come about from the technology upgrades increased regulation has often forced.

**THE “DOUBLE-EDGED SWORD” OF CLIENT DATA**

WealthBriefing research has been tracking the data management issue for several years now, finding in 2017, for example,
that 37% of wealth managers had moved to collect as much data as possible on their clients’ profiles and objectives (while just 3% were content to gather only the bare minimum).

Now, as Figure 3 shows, enhancing data management is a priority for 71% of wealth managers (2017: 70%) and only a negligible 2% say that improving the way that data is gathered, stored and managed is not on their firm’s agenda.

The reasons why better data management has become a priority – and what institutions intend to achieve from it – warrant some exploration, as a potent mixture of hopes and fears are at play.

**DATA FEARS GET REAL AS GDPR LOOMS**

First among the fears is of course the May 2018 implementation of the EU’s General Data Protection Regulation. While ostensibly only a piece of European legislation, it extends a number of rights and protections to European citizens wherever their data is handled, bringing institutions all over the world into its scope. We can also expect the GDPR to be increasingly mirrored/complemented by regulators globally (the UK’s Data Protection Bill being one example). Record levels of breaches and corporate malfeasance scandals have brought data privacy into the public consciousness as never before, with legislative measures sure to follow.

The fact that organisations face fines of up to €20 million or 4% of global annual turnover for GDPR breaches has had wealth managers as worried as any other sector – and possibly even more so due to the sensitivity of the data they hold and the ability of their clients to seek financial redress (another right enshrined by the Regulation).

The fact that it comes at a time of huge regulatory upheaval in virtually all areas has also been the cause of much consternation. Yet despite the inevitable pains that have ensued, it is arguable that the GDPR has actually served institutions well in forcing them to get their houses in order on the data front. “GDPR has probably had a positive side effect in forcing firms to develop a coherent data management strategy – perhaps for the first time for many,” said Dennis Harhalakis.

GDPR compliance first requires organisation to get a firm handle on exactly which data they hold on clients, and where it is held. This will have been no easy task, given the plethora of (siloed) systems wealth managers are likely to be using internally (see page 19), or have done over the years. Then there are likely to be numerous external data repositories to also consider.

Mike Toole observed that the Regulation will have also served a useful purpose in forcing wealth managers to take a long, hard look at any partners they work with too. “GDPR preparations have been a good exercise in prompting external vendors, traditionally not regulated to the standards we are used to, to operate at the standard we need them to,” he said. “It’s provided a useful focus as some data processors have historically been a little bit blasé in thinking the rules don’t apply as much to them as they do to data controllers like wealth managers.”

In many ways client data represents a “double-edged sword” to wealth managers. Its proliferation carries the potential for enormous business benefits and risks almost in equal measure, and it is up to firms to ensure that they end up on the right side of this equation, our experts urged.

The GDPR (and similar legislation) may be a source of pain, but improved focus on client data should pay great dividends too – particularly if similar efforts are put into turning management information into actionable business intelligence. “If you’re ‘doing’ data well, you should be able to really improve the client experience and reduce risk,” said Verona Smith.

“As of today, risk is the primary driver because managing financial crime risk is one of the top priorities for any bank, but better data management combined with the right processes can also drive efficiency and produce a better client experience,” Anil Venuturupalli added. “It also opens up the possibility of analytics to serve the client better looking at product, pricing and market data.”
As Figure 4 shows, confidence in being able to tackle cybersecurity risks varies considerably across the industry. Only 15% of respondents say their organisation is highly confident, while just over a fifth (21%) are not confident in their ability to tackle cyber-threats.

Here again, wealth managers’ most pressing concerns are very much in evidence in how they go about their technology investments. “Five to ten years ago, functional fit and price comparison were the most common scoring mechanisms, while security, architecture and hosting formed a much smaller percentage of the buying process,” Paul Bebber remarked. “Compliance and security now represent at least 25%, if not more, and vendors must be prepared for this activity in the contract process.”

This emphasis may be expected to become even more pronounced looking ahead. According to PwC, almost three quarters (73%) of asset and wealth management CEOs are currently “somewhat or extremely concerned” about cybersecurity threats. The number of attacks continues to rise, with financial services firms - and particularly those serving HNWIs - increasingly embattled.

RECORD-HIGH THREATS

Taking the UK, while in 2014 firms reported just five “material” cyber-attacks to the regulators, this figure rose to 49 in 2017 (ransomware was noticeably on the rise, accounting for 16% of reported attacks). Last year also saw 174,523 cases of identity fraud in the UK – its highest ever number - and a record 1,579 data breaches taking place in the US.

Unsurprisingly, cyber-security is now a focus for the financial authorities (and correspondingly, insurance providers serving the sector). There has been a noticeable rise in the proactive testing of firms’ readiness and they are increasingly being exhorted to disclose cyber-related problems to regulators in real time, meaning that extreme scrutiny and reputational damage for failings are set to be unavoidable going forward.

The US Securities and Exchange Commission has emphasised the risks cyber-attacks pose to financial markets and its examiners will be conducting targeted assessments of regulated entities’ cyber-security governance and risk management procedures, for instance.

Importantly, the UK and EU are issuing new data protection standards (the Data Protection Bill and the General Data Protection Regulation respectively), with other jurisdictions sure to follow, and it is thought that hefty fines for inadequacies (and even capital charges) will soon be a common feature of the sector.

As already discussed the EU’s GDPR, which comes into force on 25 May 2018, is a particularly worrisome development for the under-prepared (which many firms are likely to be, given that the Regulation follows so closely after MiFID II preparations). Significantly, individuals affected will have the right to seek compensation even if a firm seems to have done everything it can to protect data – a particularly daunting prospect for a sector serving people who zealously guard their privacy and have the means to aggressively seek legal redress.

STRENGTHENING HUMAN AND TECHNOLOGICAL DEFENCES

As detailed overleaf, the cyber-security risks facing wealth manager are many and varied, with each aiming to exploit a different type of weakness in an organisation’s defences. While some of these will be purely technological in nature, many rely on an element of human fallibility too. In fact, it is thought that 25% of data breaches are caused by human error.

Research has shown high vulnerability to phishing campaigns among both clients and staff, perhaps unsurprisingly given their increasing sophistication. “Five years ago, the threat was relatively low,” said Mike Toole. “Now, I would say that at least one of my employees weekly will detect a reasonably well put-together spear-phishing scam that’s managed to get through the various safeguards and shows a high level of research about our organisation.”

In the words of Anil Venuturupalli, “cyber-security is now just as much about human behaviours as it is about technology”. It therefore calls for all stakeholders to take responsibility for mitigating threats and not just IT staff. “Cyber-security is now more than just utilising smart security technology – it’s also about educating colleagues and clients so they can help protect the bank and keep customers’ information safe,” he said. “Cyber-security can improve the controls but it is also important for our people assets to understand how to protect us.”
A willing sacrifice of privacy for convenience in our digital interactions is a real phenomenon of our times, so in addition to internal training, Phil Newbold also pointed to a need for significant client education, particularly on the benefits of using secure portals. “There can be some resistance against logging into a secure domain to download documents because that’s an inconvenience to them,” he said. “Client needs must be met on their terms; viewing sensitive documents must be secure from any channel and device. The challenge is balancing this with ease and simplicity of access.”

A lackadaisical approach to social media security among clients has recently come to the fore of concerns. Scorpio Partnership has warned that since social media accounts are used to authenticate access to other apps and services, sensitive data could be stolen “through the back door” if social networks are hacked, for instance.

THIRD-PARTY RISKS

That wealth managers work within a complex financial services ecosystem also means they need to be cognisant of “contagion risk”. This was a lesson underscored by the 2017 attack on Equifax, where some 15 million records in the UK were compromised, but just 3% were said to have pertained to direct customers of Equifax, and the remainder to customers of other institutions which had passed their details on.

As Verona Smith pointed out, this broader view of risks might mean wealth managers have to offer much technical assistance and guidance to smaller partners, such as Independent Financial Advisors which may not have the resources and expertise to internal training, Phil Newbold also pointed to a need for significant client education, particularly on the benefits of using secure portals. “There can be some resistance against logging into a secure domain to download documents because that’s an inconvenience to them,” he said. “Client needs must be met on their terms; viewing sensitive documents must be secure from any channel and device. The challenge is balancing this with ease and simplicity of access.”

Wealth managers have clearly raised their game significantly in the war against cyber-crime in recent years, but potential weak spots still remain, not least those that might arise from human error.

It also hardly needs to be said that tackling cyber-crime represents a real “arms race” against attackers who will not be easily deterred from their attempts on valuable targets. Just as bad actors are using Artificial Intelligence technologies like machine learning to hack with increasing success, so too much institutions use it in their defence.

The industry’s digitalisation is advancing at a breakneck speed, and it’s digital defences must also in lock-step. That will call for significant collaboration across the entire wealth management ecosystem, including the technology and outsourcing providers serving institutions, our panel said.

IDENTITY THEFT

Here, criminals hijack an individual’s identity by stealing details, often combining small amounts of information from disparate sources (even photographs). Outright theft is one result, but criminals may leverage the identity to open bank accounts, apply for credit and procure fake identity documents in the target’s name – deceptions that can be very troublesome to correct.

MALWARE

Malware is software designed for nefarious purposes, such as damaging systems, granting unauthorised access to them and gathering information. Several variations come under this umbrella term:

- **Viruses and worms**
  As their name suggests, viruses infect a “host” system and spreads to other through infecting files, programmes, and drives. Viruses and worms (which “worm” their way through networked computers) can end in the catastrophic creation of a botnet, or network of hijacked computers.

- **Spyware**
  Once it has insinuated itself into a machine, spyware can steal personal information and passwords by recording keystrokes/audio or taking screenshots.

- **Ransomware**
  Ransomware allows attackers to block access to systems/files via remote lockdown, with access then ransomed for a fee.

- **Trojans**
  A Trojan is a programme which misleads the user about its true intent; these often being Remote Access Trojans which will then control infected machines as if they were an authorised person.

PHISHING & SPEAR-PHISHING

“Phished” individuals are induced to reveal personal information/ passwords or pass on malware by persuading them to visit fake websites or open links/attachments. Spear-phishing is a more sophisticated version, whereby specific individuals are targeted with authentic-looking sender details on emails and correct information on them (and their relationship to the supposed sender) included - such as where they are banked.

HACKING

Hackers gain unauthorised access to - or control over - a computer network’s security systems by targeting weaknesses in software.
This year’s survey shows that wealth managers are enthusiastically embracing outsourced/hosted technology solutions, with 49% of respondents now saying that their firm is willing or wholly willing to go down this route, against 45% last year. Meanwhile, the proportion dismissing these options out of hand more than halved from 16% to 7%.

Interestingly, however, the cohort indicating their firm is neutral on outsourced/hosted technology almost trebled, suggesting that providers do still have some work to do to fully convey the merits of this model and to allay any fears. Openness to outsourcing and hosted technology was strikingly pronounced among US respondents, which is perhaps as to be expected given that many providers are American in origin and so the promotional “story” is very well advanced in that market.

Examining what the biggest drivers behind a decision to use outsourced or hosted technology might be revealed a broadly similar picture to last year, but also an intriguing reshuffle of firms’ priorities. As Figure 6 shows, the desire to improve efficiency remained in the top spot, with the proportion of respondents believing this to be an important factor rising from 76% to 82%. However, the wish to improve service quality (77%) is now tied in second place with the aim of reducing operational risk, rising from 61% (and joint fifth) in 2017.

Yet it is also notable that respondents gave at least some weighting to all the possible drivers of outsourcing decisions; none were rated as unimportant by more than 6% of participants. Clearly, wealth managers see potential to achieve a whole raft of interrelated benefits via outsourced/hosted technology.

For Verona Smith, this picture is exactly as it should be since so many of firms’ strategic priorities are tightly bound up together.
“If you’re doing something to increase efficiency and service quality, then that actually should mean that you’re reducing costs and risks as well,” she said. “I think there is a big focus in the industry on all of those things, especially when you get a firm to a certain scale: you have to be efficient, otherwise that firm is not going to grow its profit at the same level that it might be growing its assets.”

**CONTROL THE KEY CONCERN**

As Anil Venuturupalli observed, “almost all firms in banking today are at some level of outsourcing” and typically relying on third parties in areas like market data, valuations and statementing. And, for some years now, fintech innovation has been targeted at improving specific banking processes, meaning that “outsourcing is a trend that is here to stay”, in his view.

But while the respondents to our survey appear to fully appreciate the wide range of benefits to be had from outsourcing, concerns do linger. Chief among these, according to our expert panel, is control.

“Fears come down to the fact that it’s your firm’s reputation - and your own - on the line,” said Smith. “People often might think, ‘If I can’t control it, then I’m not comfortable with it’.”

In her opinion, some of the outsourced technologies and hosted solutions available today are indeed “absolutely bullet-proof”; what is lacking is confidence that they are so and that expectations will be met.

For Jürgen Pulm, the key to success is setting up and managing outsourcing relationships well – something that calls for specific expertise within the organisation.

“You need to put stringent control processes around outsourced activities: you must have very clear Service Level Agreements in place, regular service meetings and hopefully a retained organisation within the institution that has the capability to manage all the outsourcing relationships.”
- Jürgen Pulm

More broadly, Pulm (and others) urged wealth managers to always approach outsourcing strategically, with absolute clarity over where and why it might be deployed. “Outsourcing just to outsource is pointless,” he explained. “We focus outsourcing on areas where we need speciality, where we could use added value for our business or on things that are essentially commoditised.”

“At one end of the spectrum are activities where, in Pulm’s words, “there is very little to gain by doing something yourself”. At the other lie those where there is much to potentially be lost.

Errors and disruptions of service that clients will perceive are naturally anathema. “Private clients expect precise, correct and impeccable execution,” said Dr Ariel Sergio Goekmen. “A high rate of failure will inevitably lead to a loss of clients.”

Further, while many processes, particularly those on the back-end like corporate actions, are seen as natural candidates for outsourcing, those which speak to a firm’s status as a trusted, expert advisor are unlikely to ever be up for consideration. “There are certain capabilities and competencies, such as investment advice and client data, which are best kept in-house,” said Anil Venuturupalli.

In broad terms, however, it seems that wealth managers may come to increasingly rely on specialist third-parties for some parts of their value chain - and to outsource elements of their technology infrastructure too. Venuturupalli noted, for instance, that hosted modelling and risk calculation tools are coming to the fore, while Phil Newbold pointed to the wisdom of wealth managers calling on the expertise of the best cyber-security providers.

“Fundamentally, we are a finance firm and we want to work with the best-in-class technology and cyber-security providers who do that on a daily basis,” Newbold said. “If the best solution for our clients is to outsource then we will, but then the onus is on us to make sure that our systems are able easily integrate architecturally with the best-in-breed providers.”

As discussed on pages 15 & 19, there are weighty technical (and managerial) considerations inherent around questions of in or outsourcing, and of one system versus many.

**CLOUD TECHNOLOGY TAKES OFF**

Assessing the industry’s adoption of cloud computing and hosted solutions has been a perennial theme of this report, since so many of the new ways of working firms are pursuing are only possibly via the low-cost data storage and high processing power such approaches afford.
This year’s study indicates a dramatic acceleration in the uptake of cloud-based technologies in the next three to five years, from an already high base. In our last report, 75% of respondents foresaw increased use, including 11% who predicted a very significant uptick. This year, those predicting an increase rose to 84%, with 27% saying that this will be very notable indeed.

Currently, no wealth managers foresee decreasing cloud usage over the next three to five years. This all marries well with last year’s finding that 68% of firms planned to increase their expenditure on external hosting or software.

**DATA SECURITY REMAINS THE BIGGEST BARRIER, BUT INTEGRATION WORRIES DOUBLE IN IMPORTANCE**

While cloud take-up seems to be gaining ever more momentum, this approach is of course not without its challenges.

Data security worries being a given, more striking, then, was the double profile given to integration challenges in this year’s study. In 2017, 21% of participants saw issues around legacy systems and a lack of connectivity curtailing their organisation’s adoption of cloud-based technology to a significant or very significant degree. For 2018, that proportion more than doubled to 46%.

As barriers to cloud take-up, regulatory worries and perceived costs are not going away. However, in both cases less than 10% of respondents see these as particularly pronounced concerns (9% and 6% respectively view them as very significant barriers).

For Phil Newbold, the industry’s accelerating cloud adoption owes much to its digital evolution, alongside competitive and cost pressures. “There’s huge appetite for innovation and developing new products, and working with a cloud solution the speed of delivery is so much faster. The cost of implementation is also far lower than having all of your services hosted on-site, so it becomes very difficult to argue that you should host everything yourself.”

For many firms, their bank accounts, custodians and other parts of the ecosystem are in the cloud anyway. Even large organisations are increasingly looking to move applications out of their own data centres now.”

As is well known, it is likely that even the most traditional firms’ email (and probably CRM) systems will have long been cloud-hosted, with any resistance being further broken down by piecemeal adoption elsewhere. “For many firms, their bank accounts, custodians and other parts of the ecosystem are in the cloud anyway,” said Dennis Harhalakis. "Even large
organisations are increasingly looking to move applications out of their own data centres now.” Thus, as our panel observed, all on-site would now be quite rare, even where very significant computing resources exist.

**INTERTWINED CHALLENGES**

Yet with the exception of fintechs/new entrants, it is probably equally rare for a wealth manager to be hosting everything in the cloud. Our survey confirms that for most several intertwined barriers will still loom large, combining cultural, compliance and technological factors. “Internally, informational security personnel are likely to still be arguing for on-site, while there are also principles like wanting UK data to remain in the UK at play,” Phil Newbold said. “More broadly, the sector’s transition from legacy to modern is still ongoing.”

“**Internally, informational security personnel are likely to still be arguing for on-site, while there are also principles like wanting UK data to remain in the UK at play. More broadly, the sector’s transition from legacy to modern is still ongoing.”**

- Phil Newbold

Barriers continue to be eroded at a rapid rate, however, particularly those pertaining to security, and this is likely to be a big factor driving the increasing use of cloud technology this year’s study shows. As Newbold observed, “cloud service providers have spent a significant amount of time upgrading their systems to meet the security level that banks have and proving their value there”.

“**It is increasingly recognised that, for most organisations, the cloud is probably significantly safer than housed servers. Cloud hosting firms can invest far more in security, have more sophisticated detection systems and there is no physical access to worry about – nobody is going to break in and walk away with your servers.”**

- Dennis Harhalakis

Cloud providers have also been far more visible in publicising their work with Tier 1 banks, as well as fintech and regtech companies, and promoting themselves as specialist facilitators for financial services firms, rather than just staying behind the scenes. Doubtless, wealth managers will have been particularly comforted by the knowledge that cloud providers can keep client data within their chosen jurisdictions and thereby satisfy the demands of regulators, clients and internal policy as they arise.

**BLUE-SKY THINKING FACILITATED THROUGH THE CLOUD**

Fears over cloud solutions are starting to be laid to rest, yet their most powerful messages are around the efficiencies and innovations they can help wealth managers achieve. Both sides are now increasingly enthusiastic about such partnerships.

Last year, for instance, it emerged that UBS had achieved a 100% improvement in calculation speed and a 40% reduction in infrastructure costs by deploying Microsoft Azure for its risk-management platform. The world’s biggest wealth manager then came out to say that it would use the cloud technology to power its digital transformation plans, namely to find new ways to leverage digital channels and reduce dependency on legacy technology. The Swiss giant is by no means alone in such moves in an industry striving to meet the twin imperatives of both innovation and cost-efficiency.

Looking ahead, we might even expect to see wealth managers - like other complex organisations today - embracing multi-cloud models (which enable applications to migrate between different providers) in a bid to drive down costs. Like so much, however, any growth in multi-platform technology environments will be dependent on better connectivity and API convergence. Luckily, improvements are already happening rapidly through industry initiatives like the Open Cloud Computing Interface, it was pointed out.

Noticeably, cloud service providers have also been attending more to the public relations side of things in recent years, to allay residual concerns. “It is increasingly recognised that, for most organisations, the cloud is probably significantly safer than housed servers,” said Dennis Harhalakis. “Cloud hosting firms can invest far more in security, have more sophisticated detection systems and there is no physical access to worry about – nobody is going to break in and walk away with your servers.”
Wealth managers’ technology needs are undeniably becoming more complex. As discussed elsewhere in this report, the regulatory burden grows heavier with each passing year and the need to achieve cost-efficiencies more urgent. Simultaneously, many seek to offer broader services and significantly enhance the client experience they are delivering, with this encompassing all manner of digital innovations for both clients and advisors, as well as those more “behind the scenes”.

Meeting such a breadth of needs seems to be causing firms to rely on a broader range of technology providers, with many ending up with a kaleidoscope of systems as a result. Indeed, it could be argued that this is the preference of many organisations as they seek to maximise the value of past technology investments while still acquiring cutting-edge capabilities. As Figure 9 shows, the proportion of firms looking at changing their systems entirely has almost halved over a year, while the number relying on bolt-on developments to resolve technology pressures has risen from 22% to 35%.

What might be called the “best-of-breed movement” has rapidly gathered pace in recent years and looks set to continue to do so. Last year, 36% of firms indicated that they needed multiple technology providers to fulfil their needs, rising from 33% the year before. In 2018, 26% of respondents said that all their requirements are not met by one main provider and a further 15% reported they cannot be said to have a “main” one at all. Although a tenth of firms have found a unified platform capable of meeting all their various needs, the majority seem to have at least some element of bolt-on systems at play. (As discussed on page 21, portfolio management is an area where a multiplicity of systems is prevalent.)

The question of one system versus many is fraught with complexity, however, and the choices – or necessities – that dictate a firm’s answer to it are wide-ranging. The size of the organisation, its age (which will dictate the extent of its legacy architecture) and factors like cost, complexity, control and the future direction of its digital roadmap can all play a part.

According to Anil Venuturupalli, the prevailing wisdom is that banks should utilise a global platform that consists of numerous solution components. Particularly, amid today’s drive for efficiency and cost savings, the notion of a unified platform might have significant appeal because, in the words of Phil Newbold, “when you reduce the number of systems, you reduce the complexity that you have to deal with from an operational standpoint”.

However, migration to a global platform might represent its own pains, especially for large, multi-national institutions currently operating on a patchwork of legacy systems that have evolved over many years. “The shift towards a unified global platform is expensive, comes with a degree of complexity and the associated change fatigue with the front-office,” noted Venuturupalli. As both he and Newbold also pointed out, a possible trade-off for greater operational simplicity might be allowing some scope for bespoking, particularly on the front-end.

The success of utilising a single platform depends on the ability to introduce a layer of local configuration (such as to accommodate differences in regional regulation or client tastes). As such, in Venuturupalli’s view, “Invariably, the ability to serve a global private bank through one solution requires introducing satellites and configuration layers that have the ability to adapt to local conditions while preserving the standardisation desired of the core banking technology”.

As in previous years, the difficulties of managing and connecting a multiplicity of systems (from a multiplicity of providers) figured highly in discussions with our experts. As Verona Smith pointed
out, “best-of-breed sounds like the right answer” but then it is all too often the case that none of these systems “talk” to each other optimally. “You might need a team of people to move data from one to another, making everything really inefficient and significantly raising the cost to deliver a service to the end-client,” she said. “There’s no real right or wrong answer when it comes to best-of-breed; it all needs to come down to what is important to your client.”

The consensus view seems to be that the “one versus many” question should not necessarily be seen in binary terms since, as Venuturupalli puts it, “the key is the balance between the two extremes of a single platform versus a regional component-based architecture”. As Figure 10 illustrates, most organisations are somewhere on a continuum between needing/wanting a unified, “out of the box” platform and being able to leverage an array of specialist components. The real question, therefore, is how to make this work optimally so that efficiencies, costs and the ability to tailor - and innovate - on technology are balanced.

INTEROPERABILITY DEPENDENT ON APIs

“Ideally, you should aim for fewer systems that enable you to integrate with best-of-breed providers as and when they come into play,” Phil Newbold explained. “That normally looks like a unified core banking system with a very strong connection to your unified CRM system, but also with robust APIs in place so that you can integrate with both internal and third-party systems as required.” In his view, architectures need to be robust, reliable and scalable, but at the same time flexible and open, so that firms can plug into as many new systems as they need, with as little integration time as possible.

The desire to offer the kind of front-end innovations discussed in Section 6 is a case in point here, since technology adoption can be both difficult to predict and happen at an exponential rate (such as with the explosion of mobile apps). Wealth managers’ moves to broaden their investment offerings and precisely target existing – and new - client segments are others. “Wealth managers will want to analyse as much data about their clients as possible so they will need to be able to access as many sources as possible,” said Dennis Harhalakis.

To achieve both efficiency and what Harhalakis terms “plug and play agility”, much clearly depends on the quality of APIs available across the industry and the technology providers serving it. API development is still a work in progress and connectivity (even among internal systems) remains a big concern for wealth managers. Yet great advances are being made, allowing technology stacks to be more responsive to business needs.

“If you are tied to just one IT system your business only moves as fast as that, whereas with the ability to bring in multiple vendors you get far greater flexibility to move at the pace you want, particularly at the client end,” said Mike Toole. “This gives control back to the actual wealth management firm, rather than them being forced to make decisions based on system capabilities instead of what they strategically want to achieve for clients.”

“From custodians, to market data to performance analytics, solutions have to be open to accept data from a wide area of sources,” Paul Bebber added. “Wealth management solution architecture and solutions have grown rapidly, and have to consume vast amounts of data in a flexible, open way to compete.” Clearly, firms must negotiate a complex web of wants and needs that encompass past, present and future ways of working to arrive at the right technology architecture. This being a “work in progress” for all except perhaps new entrants would seem to be the norm – particularly given the complications arising from the frenetic pace of M&A in the asset and wealth management industry (according to PwC, deal values hit record levels in 2017, totalling US$16.03 billion in the year to September).

Furthermore, rising regulatory costs are putting pressure on wealth and asset managers to consolidate in order to achieve economies of scale and compliance cost savings. Many analysts have forecasted a further uptick in deals in 2018, citing regulatory pressures as a driving force.

The pains of amalgamating different systems can make corporate marriages unhappy, and there has been a tendency for firms to layer inherited systems so that data discovery becomes a real challenge. That client information may exist in various guises within various systems and structures, clearly carries serious compliance risks (particularly under GDPR), while also preventing organisations from realising the commercial benefits of having one single “view of truth” for their clients.

Struggles with silos and legacy systems continue to have very serious implications, but once the internal API piece is completed, wealth managers will no longer labour under a multitude of systems which don’t “talk” to each other effectively. Then, once standardised external APIs are in place, third-parties will be able to start developing on institutions’ systems effectively too.

According to Phil Newbold, this external view of APIs is where the most exciting industry developments will take place going forward. “When wealth managers are open and can integrate with third-parties, they can really start to hit clients’ needs by integrating with other services to build new business models,” he said. “From a wealth management perspective, APIs start to become very becoming interesting when you explore clients’ investment or financial health data alongside third-parties, so that you can build a clearer picture on progress towards their goals.”

However, this level of interoperability stands some way away, in his view, as although Payment Services Directive II goes some way towards this sort of external view of APIs, it only calls for banks to open up their transaction data. Expectations of connectivity and openness from both customers and business will surely create great pressure for progress, however, making API development a highly significant theme for the coming years. “Google, Facebook, PayPal and so on all work in conjunction, and wealth managers and their clients will expect the same,” Newbold concluded.

PORTFOLIO MANAGEMENT SYSTEMS IN NEED OF STREAMLINING

As Figure 11 shows, 46% of firms are using four or more systems to construct, manage, monitor and report on portfolios, with 20% using six or more – a situation which it hardly needs to said will likely be a significant source of inefficiencies (for both investment and relationship management personnel). Just 6% of respondents said their firm uses one unified system for all these activities and, as Verona Smith observed, “unless all these systems are running off a single database or they’ve got good APIs between each of them then things can become challenging”. 
This year’s survey shows that wealth managers believe their organisations could stand to achieve significant efficiency savings in every area of portfolio management. However, some really stand out as being in acute need of streamlining and the eradication of manual work.

When asked to identify the top-three areas of inefficiency, compiling investment performance reports, model management and monitoring against investment mandate secured most of the overall votes (see Figure 12). Then, looking at where inefficiencies were felt to be most acute (and given a 1 rating), compiling investment performance reports, rebalancing and initial portfolio construction came out top (see Figure 13).

Wealth managers’ pain-points in portfolio management clearly differ quite widely according to their business and operational model, particularly whether clients’ assets are predominantly put into model portfolios or constructed on an individual basis. As Verona Smith noted, “inefficiencies could perhaps be less of a problem for firms where investment management is more centralised with a segregation of duties, and more so for bespoke-type ones.”

However, the great spread of organisations included in this study indicates that investment performance reports is a site of inefficiencies across the board, due to the number of systems that need to be accessed (which may not be very well connected) and the amount of manual work that then entails.

Recent WealthBriefing/SS&C Advent research looking at the portfolio management landscape in Singapore certainly confirms this to be the case. Here, 68% of respondents cited reporting as a top-three area where most labour is required, with a tenth placing it at number one. Correspondingly, almost a third (30%) of respondents estimated it takes over an hour and a half to prepare and check each client’s regular investment performance report, while for 13% of institutions this task was said to typically take over two hours.

As discussed in Section 4, a case can be made for wealth managers to use multiple specialist systems for all the different strands of their operations – particularly to deliver client-facing innovations quickly. However, the fact that less than a tenth of firms are working off a single system just to construct, manage, monitor and report on portfolios is arguably far from ideal from a practicalities perspective. “Advisors are the same as clients in that they want one screen to handle portfolio management activities; they certainly don’t want to be clicking between multiple systems that don’t ‘speak to’ each other,” Phil Newbold concluded. “Potentially APIs can help, but what is really required is a single system – or as few as possible – for them to log onto and manage.”
As Figure 15 shows, offering clients a wider selection of asset classes and investment instruments is a priority for 42% of wealth managers, and top of the strategic wish list for a tenth overall.

Interestingly (but perhaps as we might expect given investment tastes and performance expectations) drilling deeper into regional trends revealed that those firms with the strongest desire to broaden their investment offering were predominantly based in Asia, particularly Hong Kong and Singapore. UK and US-based wealth managers made up most of the rest of the cohort seeking development in this direction, both of which represent highly mature and competitive markets.

While it may not necessarily be the case that all wealth managers are currently seeking to widen their investment range, the desire to be able to do so must surely be almost universal, given how quickly tastes and the economic landscape may change, and particularly so for institutions operating higher up the wealth and sophistication scale. “Investment advice is a key area of differentiation for private banks, which is why there is a focus on broadening the range of options,” said Anil Venuturupalli, noting that firms such as his have been offering a full range of established alternatives like hedge funds or private equity for some time now.

“We’ve seen many firms interested in broadening their service and product offerings, particularly with alternative assets. Private loans and bank debt funds are just two areas where we’ve seen what might be considered institutional investments being ported in the wealth client arena.”
- Paul Bebber

Growing appetite for non-traditional asset classes has been a prominent theme of industry discourse in recent years. Interest rates remain low and the resulting hunger for alternative sources of yield seems to have primed a great many investors to make their first foray into private equity and private real estate funds, for instance. This year, 50% of HNWIs in Europe, Asia and the Gulf are willing to invest at least US$500,000 into the former and 40% into the latter, with 55% most motivated by the interesting opportunities they see and 35% by a desire to balance their wider portfolio. Significantly, a private banker is the top advisor of 44% of HNWIs when investing into such assets, although a third say they have never been introduced to these kinds of opportunities.

Investors are also piling into many other non-traditional asset classes for varying reasons.

Geopolitical uncertainty is said to have led to heightened interest in precious metals as “safe havens” for wealth, for example. Online trading platform BullionVault reported in April 2018 that its users’ total ownership of gold bullion was US$1.6 billion, more than is held by most of the world’s central banks.

Meanwhile, ethical considerations are increasingly driving investment behaviour. ESG (Environmental, Social and Governance) investments hit US$8.7 trillion at the end of 2016, up around 33% since 2014. Impact investing, where financial and social/environmental returns are yoked together, is also a hot topic today.

Impact investing’s assets under management totalled some US$60 billion last year, with some forecasting this to soar to over US$3 trillion in the next ten years.

UBS has said it hopes to steer US$5 billion of client assets into impact investments related to Sustainable Development Goals over the next five years, while Morgan Stanley has been working hard to make impact investing accessible even to retail investors, last year rolling out sustainable investment portfolios with reduced account minimums of US$10,000 on its Investing with Impact Platform.
APPETITE MAY BE STRONG, BUT CHALLENGES ABOUND

It is well acknowledged that non-traditional (and non-marketable) asset classes can present great challenges in portfolio management work, especially around valuations and performance reporting (such as a lack of reliable pricing data and accepted benchmarks, along with the intricacies of calculations for real estate or private equity funds). Without technology capabilities designed to facilitate a diverse asset mix it is easy to see how much manual work might become involved.

Greater technical issues may come into play when we consider the momentum building around Socially Responsible/ESG and impact investing, and the high demand coming from the UHNW end of the spectrum in particular. As Anil Venuturupalli observed, emerging providers in this relatively new space have often built technology into their business model, offering and marketing investments directly through an electronic platform, which means that there are technology implications for those wishing to access their products.

He said: “The key for technology will be to ensure the architecture adopted can be flexible to allow for new offerings to be launched at pace. This has to be from an end-to-end perspective. If the channel can offer the product, the back-office needs to be able to book and manage it.”

Demand from clients may be strong, yet many could see offering a more diverse range of investments as too cumbersome and costly without significant technology upgrades. “Hand” tailored portfolios are an expensive proposition, while even businesses focused solely on models will need portfolio management solutions that minimise (or hopefully eradicate) manual intervention and promote Straight-Through-Processing from the front to the back-office.

“Institutions can only manage a limited number of portfolios with high levels of human oversight and intervention, and will need a strong technology solution if they are delivering a greater range. Even if you’re running models, adding different base currency options and asset types (depending on your clients’ requirements) can exponentially increase the range of models you have to manage.”
- Mike Toole

“First, you need well-structured data and processes, and then flexible systems sitting on top of that which can handle a variety of different offerings and multiple changes at scale. It’s a challenge, but I think everything can be managed with clear data and a good technology set-up.”
- Phil Newbold

Ensuring high operational efficiency in portfolio management activities while also meeting client demand for tailored (or at least mass-customised) investment portfolios will be a challenge for wealth managers. But it is one they must meet in a world where the sector’s investment proposition is under pressure from the commoditisation brought about by the rise of passives and robo-advice. March 2018 marked the fiftieth consecutive month of inflows into ETFs and ETPs listed globally, with year to date inflows hitting US$137.12 billion.

Phil Newbold concluded: “We must look to diversify and show that you come to a wealth manager for a higher level of service, and a better, more bespoke investment solution – and that has an impact on your technology requirements.

“First, you need well-structured data and processes, and then flexible systems sitting on top of that which can handle a variety of different offerings and multiple changes at scale. It’s a challenge, but I think everything can be managed with clear data and a good technology set-up.”

ROBO-ADVICE

Robo-advice generally refers to online platforms that provide automated, algorithm-based financial advice (initially for portfolio management but now increasingly for pension planning and other more complex areas). Regulators have smiled on robo-advice as a means to plug the “advice gap” while institutions are recognising that with minimal human intervention and therefore personnel costs, robo-advice can help them acquire wealthy clients before they are wealthy and really amp up their AuM cost-effectively. How they acquire and implement robo-advice capabilities is a complex question, however.
As Figure 16 shows, our survey respondents are generally very upbeat on the sector's growth prospects, with close to eight-in-ten overall being optimistic for their location and a tenth very much so. High optimism was seen across North America, Europe, Switzerland, the UK and Asia almost in equal measure.

Forecasts certainly warrant this buoyant mood. PwC, for instance, anticipates that the sector’s global assets under management will increase dramatically in size by 2025, from US$84.9 trillion in 2016 to US$111.2 trillion by 2020, and then again to US$145.4 trillion by 2025.

The industry has certainly boosted assets under management recently - and brought costs under far better control despite the compliance pressures discussed on page 10. According to Scorpio Partnership’s latest Global Private Banking Benchmark, AuM grow by almost 4% on average in 2016, while at the same time cost-income ratios also fell below 80% for the first time since 2012.

However, the research organisation warned that the sector's gains in profitability masked an underlying struggle to improve revenues. Operating income rose by just 0.04% on average, leading the report’s authors to urge wealth managers to look to the revenue side of the profits equation by enhancing their proposition with advisory capabilities and improving the client experience to stave off pricing pressure.

While making these enhancements is not solely a matter of technology, our experts were unanimous that is indeed a very large part of the growth and profitability picture - first in allowing wealth managers to realise the operational efficiency gains that make broader, deeper service offerings feasible, and second in creating the kind of premium client experience that justifies a premium price.

But although wealth managers have clearly been seriously ramping up their efforts to digitalise and innovate, our experts believe the industry generally still has a very great deal of catching up to do in comparison to the FAANGs (Facebook, Amazon, Apple, Netflix and Google).

"Technology enhancements are having a positive influence on the industry’s prospects, but not enough in my view," said Verona Smith. “At the end of the day, growth will come down to who is easiest to do business with.”

Successful fintechs have recognised this, Dennis Harhalakis observed, but have mainly focused on narrow functions/segments with high friction levels or those underserved by traditional institutions. This means that wealth managers remain very much "in the game" despite increasing competition.

However, wealth managers are still being too restrictive in their technology thinking, in his view, although praise is due for their efforts to rapidly digitise their business models and use innovations to improve their structures, processes, services and channels.

"Truly disruptive innovation has only really been seen in the robo-advisor space, and Artificial Intelligence will be massively important in shaping how investment and advice is created and delivered. Industry players have spent too long comparing themselves to each other rather than asking ‘How can I be exponentially better?’" - Dennis Harhalakis
As page 10 details, the regulatory burden has tripled since 2011, with 2018 (and 2019) seeing some particularly wide-reaching (and indeed extraterritorial) rule changes come into play. Yet as Figure 1 underscores, few in the industry believe that we have reached the apogee of compliance change even now: 57% of believe the onslaught of new rules will gather even further pace over the next three to five years.

Skyrocketing compliance costs are seriously eating into profitability, and the situation is expected to significantly worsen. An overwhelming 89% of institutions in the US, Europe and Asia believe regulations are increasing costs. Firms are thought to be typically spending 4% of total revenues on compliance currently, but it is feared that this may rise to 10% for some organisations by 202212.

Last year’s survey confirmed that while the urge - and commercial imperative - to innovate technologically may be strong among wealth managers, the pain of increased regulation was holding them back, both in terms of budgets being blown and corporate energy being drained. This year, regulation is shown to be acting as an even bigger brake on innovation.

In our last survey, 40% of respondents said that budgetary constraints stemming from regulatory change had significantly held back their firm’s strategic IT investments; in 2018, that figure rose to 44%, with close to a fifth (17%) reporting the most severe negative impact.

Meanwhile, this year 61% of participants reported that never-ending compliance change had drained energy at their organisation to the extent that innovation had been held back, rising from an already high 47%.

Today, over a quarter (27%) see the most severe negative impact on corporate motivation as having occurred.
FORCED INVESTMENTS VS INNOVATION

Funds that could otherwise be spent on innovation are clearly being eaten up by compliance to a huge extent, as is the energy wealth managers can dedicate to the more exciting applications of IT. As Figure 19 shows, wealth managers are increasing their spend on technology innovation, but these increases are perhaps not as great as firms would like, given growing competitive pressures and an ever-more digitally demanding client base. Although a quarter of respondents expect their firm’s spending on technology innovation to increase greatly in the next three to five years, the majority of 56% expect only moderate rises.

FIGURE 19
How do you see your firm’s spending on technology innovation changing in the next 3-5 years?

- INCREASING GREATLY: 25%
- INCREASING MODERATELY: 54%
- REMAINING THE SAME: 15%
- DECREASING MODERATELY: 5%
- DECREASING GREATLY: 0%

FIGURE 20
Top motivators for technology innovation

- CLIENT EXPERIENCE ENHANCEMENTS: 23%
- OPERATIONAL EFFICIENCY GAINS: 19%
- IMPROVED PERFORMANCE AND RISK: 13%
- REDUCED REGULATORY RISK: 12%
- GREATER CUSTOMISATION FOR CLIENTS: 12%
- INCREASED ADVISOR PRODUCTIVITY: 11%
- MORE VISIBILITY AND CONTROL: 11%

MIXED MOTIVATIONS FOR INNOVATION, BUT CX ENHANCEMENTS WAY AHEAD

Examining what wealth managers are looking to achieve from technology innovation reveals a highly varied picture on their priorities (which is arguably to be expected as most of these aims are likely to be on organisations’ wish-lists).

What is clear, however, is that improving the client experience is way ahead: this secured 23% of the top-three votes (and double those for most other motivators), with only operational efficiency gains coming close in popularity. Of those who saw client experience enhancements as a top-three innovation priority, 58% gave this a number one rating.

It might be thought that the client experience is not quite as important in this sector compared to others like retail, as wealth management is foremost about security of assets and the attainment of financial objectives. Yet market incumbents are also experiencing growing regulatory and competitive pressure to demonstrate value for money, alongside pricing pressure from low-cost, technologically-oriented new entrants. As a result, wealth managers have an urgent need to develop their propositions, such as through broader investment capabilities and a more holistic advisory approach, and to improve the customer journey.

The client experience can therefore be seen to come close behind trust-related “givens” and naturally have a large digital component today. The ability to interact and transact seamlessly via digital channels has come to be expected in virtually every sphere of life – financial services most certainly included.

““The absolute most important thing is trust, which itself is a function of things like price and brand, but then after those factors differentiation depends on the client experience and how that is delivered,” argued Verona Smith. “In our sector that will always include face-to-face interactions, but increasingly via the whole range of online ones too.”

- Verona Smith

Correspondingly, the panel alluded to digital offerings informing clients’ choice of wealth manager more and more. “Trust in the institution and advisor is paramount,” said Phil Newbold. “But while cutting-edge technology may not be top priority for investors just yet, we’re certainly seeing questions like ‘What is your digital offering?’ and “What is your technical capability?’ increasingly creeping in.”

Clients may be only demanding fairly standard capabilities at present, rather than the kind offered by Google, Amazon, Facebook and Apple. Yet the panel cautioned that this could rapidly change. A willingness to rapidly evolve technologically – and having the architecture to be able to do so – are therefore crucial.

““Wealth managers need to be ready with a flexible system to adapt, because client behaviour can change overnight,” argued Newbold. “If you are using an inflexible legacy system it might take you years to catch up with those who are on modern ones.”

“Dismissing things can be very dangerous as with technology as it can just take one app to flip things on their head and get...
“We observe that clients over 65 are often very much iPhone and tablet users and like to be involved in investing for themselves online. This means that a provider who allows them to work easily from any location will have more growth in that segment.”

- Dr Ariel Sergio Goekmen

“We observe that clients over 65 are often very much iPhone and tablet users and like to be involved in investing for themselves online,” said Dr Ariel Sergio Goekmen. “This means that a provider who allows them to work easily from any location will have more growth in that segment.”

Irrespective of age, the mindset of many people is ‘If I can’t do it on my phone, then it’s not worth it,’” Verona Smith added. “Furthermore, what we might call ‘gamification’ is now just what people expect from a user experience.”

Although clients of all ages may have ever-higher digital expectations, it is of course the drive to appeal to the next generation of clients that is really motivating many firms. Alongside the regulatory burden, technology advances and inter-generational wealth transfer are arguably the two biggest forces influencing the sector today. In North America alone, US$30 trillion is expected to pass to the younger generation in the next few years, yet as Mike Toole observed, the majority firms lose assets upon succession. Technology innovation is at the intersection of those trends, seen by many wealth managers to be key in preventing those outflows.

“The next generation probably interact more with technology than they interact with money, whereas for their parents it’s the other way around. We’re trying to engage the upcoming generation through our client portal and digital channels, getting them used to money through technology.”

- Mike Toole
DIGITALISATION: A CONTINUUM, RATHER THAN COMPARTMENTS

Independent industry consultant Dennis Harhalakis explains why there is a better approach than compartmentalising digital and non-digital activities in wealth management.

Technology underpins everything we do in wealth management and, while the industry prides itself on being relationship based, there is nothing to say that this relationship is limited to being between two individuals. Wealth managers have been working hard to institutionalise clients and Amazon has shown how to create exceptional loyalty with almost no human interaction at all.

For wealth managers, in the same way that there is no perfect end-to-end system, there is also no one-size-fits-all model. This is because the industry contains a diverse set of client groups, a wide array of products, and evolving technology and service landscapes. As the rise and fall of the universal bank has shown, changes in business model efficacy and regulation can be sudden and brutal.

With the entry of robo-advice, there has been a focus on dividing activities into digital vs non-digital. But this compartmentalisation is not helpful, and it’s more insightful to think of activities, products and services being produced and delivered on a scale that stretches from digitally led through digitally-assisted to non-digital.

This approach recognises that clients will also need to be classified on the same scale and, most crucially, will have different digital expectations for different products.

This creates a framework where you compare client vs product vs level of digital delivery. Not all services can be delivered digitally and not all clients want everything delivered digitally, but digitisation is at the heart of scalability and user experience. So, it’s crucial to understand where there are gaps and mismatches. This framework can be overlaid with cost and pricing metrics to build a digital heat map showing product and service profitability.

The example below shows pricing and digitisation as ranges (activities are shaded grey to show that the pricing scale is not applicable).

<table>
<thead>
<tr>
<th>ACTIVITY/PRODUCT/SERVICE</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Investment/Venture capital</td>
<td></td>
</tr>
<tr>
<td>Philanthropy</td>
<td>10bp</td>
</tr>
<tr>
<td>Estate planning</td>
<td>150bp Bespoke Charge</td>
</tr>
<tr>
<td>Discretionary portfolio management</td>
<td></td>
</tr>
<tr>
<td>Portfolio lending</td>
<td></td>
</tr>
<tr>
<td>Investment advice</td>
<td></td>
</tr>
<tr>
<td>Portfolio construction</td>
<td></td>
</tr>
<tr>
<td>Trading</td>
<td></td>
</tr>
<tr>
<td>Risk-profiling</td>
<td></td>
</tr>
<tr>
<td>KYC</td>
<td></td>
</tr>
<tr>
<td>Data Capture</td>
<td></td>
</tr>
</tbody>
</table>

Digital-led | Digital-assisted | Non-digital
METHODOLOGY

For this study, 85 wealth managers from across the globe were surveyed between January and March 2018.

### Location

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>44%</td>
</tr>
<tr>
<td>UK</td>
<td>22%</td>
</tr>
<tr>
<td>Singapore/Hong Kong</td>
<td>16%</td>
</tr>
<tr>
<td>Europe - Other</td>
<td>6%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2%</td>
</tr>
<tr>
<td>Latin America</td>
<td>2%</td>
</tr>
<tr>
<td>Africa</td>
<td>1%</td>
</tr>
</tbody>
</table>

### Assets under management

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$100m</td>
<td>18%</td>
</tr>
<tr>
<td>$101-500m</td>
<td>8%</td>
</tr>
<tr>
<td>$501m-1bn</td>
<td>3%</td>
</tr>
<tr>
<td>$1-10bn</td>
<td>25%</td>
</tr>
<tr>
<td>$11-50bn</td>
<td>15%</td>
</tr>
<tr>
<td>$51-100bn</td>
<td>4%</td>
</tr>
<tr>
<td>$101-500bn</td>
<td>15%</td>
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<tr>
<td>&gt;$500bn</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Average client asset size

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$1m</td>
<td>22%</td>
</tr>
<tr>
<td>$1-10m</td>
<td>42%</td>
</tr>
<tr>
<td>$10-50m</td>
<td>17%</td>
</tr>
<tr>
<td>&gt;$50m</td>
<td>19%</td>
</tr>
</tbody>
</table>

REFERENCES

1. “Compliance Matters” “Regulation is eating the world!” by Martyn Evans, Altus Consulting, April 2018
2. PwC “Global CEO Survey” for 2018
3. Cifas’ “Annual Fraudscape Report” 2018
4. Identity Theft Resource Center and CyberScout, January 2018
5. The Ponemon Institute’s “2017 Cost of Data Breach Study”, sponsored by IBM Security
7. BNP Paribas/ Scorpio Partnership “Wealth Management Private Assets Survey” 2018
8. Forum for Sustainable and Responsible Investing
9. Global Impact Investing Network
10. ETFGI’s “Global ETF and ETP Industry Insights Report”, March 2018
12. Duff & Phelps, April 2017
14. RBC Wealth Management “Global Wealth Transfer” report, 2017
This report has necessarily focused on the challenges facing wealth and asset managers, particularly around controlling compliance costs, but it is hoped that overall a positive note was struck.

According to PwC, the industry can look forward to dramatically increasing its AuM by 2025 (from US$84.9 trillion in 2016 to US$111.2 trillion by 2020, and then again to US$145.4 trillion by 2025), while cost control measures do seem to be bearing fruit.

That an industry shake-up is afoot is undeniable, however. But while wealth managers might be facing greater pressures than ever before, many firms are relishing the opportunity to differentiate themselves in an ever-more competitive market.

Forward-thinking organisations are also ensuring that they take the benefits away from the highly draining compliance overhauls they are having to regularly implement. These may be hugely challenging, but they can also act as strong spurs to positive action. As our panel observed, new requirements to audit data, unbundle costs and rethink client communications will have actually helped many firms refine their strategies for the future. Similarly, great benefits may come about from the technology upgrades increased regulation has often forced.

As this and other WealthBriefing research has found, institutions are keener than ever to leverage the latest technology to reduce compliance risk, increase efficiency and improve the client experience. Yet what constitutes the right mix of solutions might vary hugely firm to firm – in the same way that end-clients require a unique mix of products and services. Drawing these kinds of distinctions and learning about the different priorities of industry participants around the world is one of the most fascinating elements of this research project.

We are most grateful to all the experts and survey respondents who contributed to this report and would welcome feedback on this or any other research.

WENDY SPIRES
Head of Research
WealthBriefing

CONCLUSION
The Technology & Operations Trends in Wealth Management Report 2017
(WealthBriefing & SS&C Advent)
This is the fourth WealthBriefing research report examining technology and operations trends in the wealth management industry globally. Topics discussed in this wide-ranging study include compliance pain-points, barriers to technology investment and client-facing innovations like mobile.

Help or Hindrance? The Link Between Technology Provision and Advisor Productivity
(WealthBriefing & SS&C Advent)
Examining just how well wealth managers’ technology systems are facilitating advisors in their work in supporting existing clients and winning new ones, this piece highlights the growing importance of technology as a recruitment and retention differentiator, with firms’ poor systems leaving their staff frustrated.

Client Reporting: Or is it Client Communications?
(Family Wealth Report & Private Client Resources)
This study tackles the subject of client reporting in the depth it now so clearly merits. While there are wealth managers pushing themselves to offer the enhanced reporting capabilities clients will increasingly expect, the results of this research show just how great the gap between expectation and reality actually is - for HNW individuals and their advisors alike.

A Tale of Two Cities (For Now):
The Rise of External Asset Management in Asia
(WealthBriefing Asia & UBS)
With the independent asset management landscape in Asia currently dominated by the powerhouse cities of Hong Kong and Singapore, this first-of-its-kind research casts light on how this business model is set to evolve and the challenges it faces – both in these Two Cities and the region’s nascent growing markets including Thailand, the Philippines and Malaysia.

Evolving Operating Models in Wealth Management
(WealthBriefing & Avaloq)
The first of two companion-piece reports on the state of technology in the wealth management industry, this research examines how firms are working to streamline operations and achieve compelling efficiency gains through alternative sourcing models. In particular, it focuses on the outsourcing of standardised functions so that resources – and corporate energy – can be redeployed in truly differentiating areas.

Innovation in Wealth Management
(WealthBriefing & Avaloq)
Part two in this digitalisation exploration draws back the veil on what is really happening within institutions as they dip their toes into exciting new developments in client- and advisor-facing technology. It assesses the true pertinence of perceived “nice-to-haves” such as mobile apps, social media, big data and digital vaults, as well as highlighting what firms are doing to eradicate paper-based processes and foster bottom-line growth through continual improvement of the client experience.

Towards True KYC: Technological Innovations in Client Due Diligence
(WealthBriefing & smartKYC)
Combining best practice insights from wealth managers and legal professionals alike with exclusive survey data, this research examines how technology can be used to help reduce the client screening burden whilst maintaining the tightest of risk controls as client due diligence policies and KYC procedures creep to the top of the risk management agenda.

The Weight of Money - How Private Investment Is Changing World Real Estate
(WealthBriefing & Savills)
With burgeoning interest in real estate as an asset class showing no signs of abating, this study discusses the key factors driving this cultural shift. This study brings together survey evidence from wealth managers and expert opinions to reveal and contextualise the trends in global property investment among high net worth individuals, from the real estate destination of choice to how portfolio allocation amounts are set to shift.
With 60,000 global subscribers, WealthBriefing is the world’s largest subscription news and thought-leadership network for the wealth management sector.