

DATA ECONOMY

Financial Services

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OVERVIEW

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Data can bring completely new insights into investment or provide customers with a real advantage when using a service

DAN BARNES

Deep within the world of finance, primeval data-sniffing creatures are growing and evolving. Great wafts of data are drifting from your mobile phone. Every digital action sends a cloud of information out across the network. You are leaking data and, in finance, these signals can form a useful picture of market activity.

These creatures' antennae are tipped by a vast array of sensory equipment; drones filming crop growth, vehicle activity and shoppers on high streets; vast electronic "ears" listening to the clamour of social media; a finger on pulsating stock market price movements.

"Two laptop computers are occupying an entire floor which used to be full of traders," says Bartt Charles Kellermann, chief executive of hedge fund consulting firm Global Capital Acquisition. "That trend is accelerating, the sophistication of these machines is increasing and investors see the writing on the wall.

"They know that at some point they are going to convert most of their allocations to strategies that are being run by machines, because they don't have emotion, they don't get out of the wrong side of the bed. They sell when they are supposed to sell, they buy when they are supposed to buy."

This does not mean that people are out of the picture. Behind every good trading system is a good data scientist. Being data liter-

ate, data scientists understand what particular data does and does not represent. They have to find the right datasets, check it for quality and then build a model that reflects the reality of the market.

In its recent paper, *Big Data and AI Strategies: Machine-Learning and Alternative Data Approach to Investing*, investment bank J.P. Morgan noted that new datasets are often larger in volume, with greater velocity and variability compared with traditional datasets such as daily stock prices.



If data is a constant flow of rich information, it can be the equivalent of a satnav in negotiating the market

Among the alternative datasets it noted were being used to guide investments, it included data generated by individuals in social media posts, product reviews, search trends and so on; data generated by business processes; and data generated by sensors.

If data is a constant flow of rich information, it can be the equivalent of a satnav in negotiating the market. Yet in many cases, that data is more akin to the cat's eyes in the road, with a sparse and unreliable distribution, not complete enough to base a decision on.

In those instances, firms may need to go out and search for data sources that can be used to piece a more complete picture together. AXA Investment Managers has done just that, developing its own tools in-house to support traders and clients, by aggregating fixed-income market data.

Paul Squires, global head of trading and securities financing at AXA Investment Managers, says: "We wanted to create an environment where the data that our trading counterparts provided us was made meaningful beyond the normal market interaction. We wanted to incentivise them to give us data that we would then respond to, to cultivate a better dialogue."

Currencies and many stocks trade frequently, but bonds trade more infrequently, making it harder to find accurate price information, and where they can be sourced or sold. Combining the use of multiple data sources with human trading skills can provide a real advantage in trading at the right price and executing a deal optimally.

"Data is a key differentiator in your ability to trade a bond at the right level, but if you were only looking at the data, you would hit a lot of problems," says Mr Squires. "Frankly there is no price discovery until you ask a counterpart to make you a price, so having a pre-trade picture of where a price should be is only part of the price discovery process. Picking up the phone and getting a firm price to trade at is another."

There are also limits to existing datasets as Mr Squires notes that any market stress situation can make data meaningless. "For bonds, in particular, if you have, for example, five million to sell and no one wants to buy them, there is no price – it's as simple as that," he says.

Data is not only a technology play, although investing in the technology to analyse it is fundamental. Whether a retail bank, an investment bank or a fund manager, firms that excel are able to embed the idea of data as an asset in their business. This ensures data is constantly sought and gathered in such a way that it retains its value.

"It is less a technical issue and definitely more a cultural issue," says Matthias Kröner, co-founder and chief executive of German digital bank Fidor. "It's a matter of attitude what you want to do with it. I can use data in the sense of managing people on the one hand, but on the other, I can use it so my customers can access data easily and get the outcome of data algorithms easily in a way that is actually helpful for their financial life."



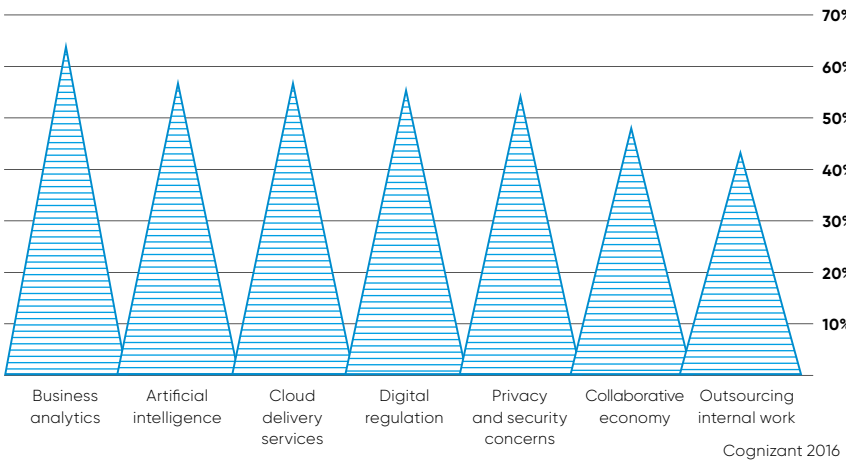
As technology evolves, what can be considered useful data is changing. Analysis of graphics and written word as unstructured data, as opposed to the structured rows and columns of figures held in databases, is creating new opportunities. Satellite photography and Twitter feeds are all supporting trading ideas.

"It's all about unstructured data; finding data, cleaning it, putting it into some kind

of analytical framework from which the PhDs can then make heads or tails of," says Mr Kellermann. "There is still some scepticism whether or not that really adds value; a lot of the social media data, people have two views on. Sentiment has an impact, but closer to an event. So this sort of data is a very sophisticated animal and you have to understand multiple dimensions of it to evaluate its true value."

IMPACT OF DIGITAL ON BANKING AND FINANCIAL SERVICES

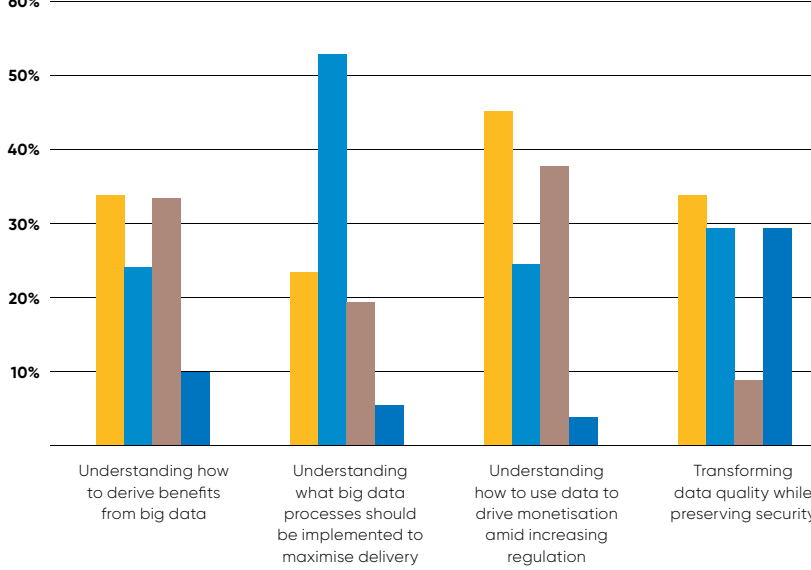
FACTORS THAT WILL IMPACT THE INDUSTRY MOST BY 2020



BIG DATA CHALLENGES FOR BANKING AND FINANCIAL SERVICES

INDUSTRY PROFESSIONALS WERE ASKED TO RATE THE FOLLOWING IN ORDER OF PRIORITY

High priority Medium priority Low priority N/A



Big Data and Analytics for Financial Services 2016

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WE DON'T DO DATA BY THE NUMBERS

UNLOCK THE VALUE OF YOUR INFORMATION



CAPCO

Path to profitability for chief data officers

The chief data officer or CDO can transform the business of banking. Yet, within each firm, the first steps they take will determine their long-term success

"We are on a journey from data to information and from information to insight," says Chris Probert, UK data practice lead at consultancy Capco. "We are trying to teach people a language they can use to talk about data so they can use it to drive value."

Getting a faster or deeper understanding of a situation can enable a business to seize opportunities ahead of the competition. That level of insight resides within the data that a financial services firm collects. Yet without an adequate level of focus, businesses can struggle to realise that opportunity.

"Those people gathering data within banks have not necessarily thought of data as an asset to use for driving more sales or getting more insights around customers," says Christer Bergquist, managing principal of Capco Sweden. "So an educational aspect falls upon the CDO to inform the wider bank about how data can be used to drive increased revenues. That is a cultural change."

Making a cultural change of this nature is predicated upon the agenda of the CDO and their influence. Many finance houses first developed the position as an offshoot of

either their IT or business functions, depending on the relative strength of those two parts of the organisation.

In its early incarnation, the role was driven by the increased volume of data that businesses needed to manage and process to comply with the growing regulatory burden. *The Comprehensive Capital Analysis and Review (CCAR)*, which was rolled out in 2013, required bank holding companies with US operations and more than \$50 billion of assets to reconcile risk and finance data to support consistent reports for management and regulation. The Basel Committee on Banking Supervision (BCBS) 239 regulation imposed principles for effective risk data aggregation on global systemically important banks and domestic systemically important banks from 2013 onwards.

Poor data dogged the banking industry prior to the 2008 crash. A combination of revenue-chasing and firefighting that occurred post-crash left banks unable to focus on quality issues.

"People have been complying with regulation at such a pace that they have not had time to fix the data quality," says Steve Hargreaves, partner for UK capital markets at

Capco. "They have had to get reporting for the many deadlines that came one after the other. Now they are coming to a point where the data quality is incredibly poor and it's patently costing them money. They are missing opportunities to save cash and capital, and drive revenue."

🍋 Data management is an evolving industry, so banks and the industry are looking for vendors to partner with to develop tools and methodologies

REFINING THE BUSINESS

BCBS 239 and CCAR provided the regulatory impetus to take this issue seriously. The skewing of budget towards compliance projects allowed BCBS 239 and CCAR to function as Trojan horses in prioritising the understanding of, and resource allocation towards, data quality.

Building a picture of capital requirements, risk models and the accessibility of data gives banks an understanding of data throughout the enterprise to help them meet compliance demands. Naturally this information provides firms with a lot of information about their organisation that they could use to make strategic decisions.


Having gained insight, several top-tier banks have stepped away from major markets in recent years. Moreover, the domain knowledge around the data held within the firm and what it represents can be used to make both business and compliance decisions. This has naturally strengthened the CDO's hand.

Nevertheless, there are technological steps that need to be overcome to give the CDO the flexibility to move along the chain from data to insight. Data management is an evolving industry, so banks and the industry are looking for vendors to partner with to develop tools and methodologies.

Many firms are reviewing their big data programmes, which have been very expensive and struggling to meet expectations on cost-savings. Some early adopters are now looking at developing data solutions, which treat the movement and storage of data like a supply chain, more akin to how Amazon looks at its stock than how banks have traditionally looked at data.

"People have started to realise their organisations, their people and their data are connected like networks, and that they should be using technology which is more akin to relationships and networks," says Mr Hargreaves. "However, the technologists in banks are culturally very aligned to traditional solutions. So there is a lag as people get used to the new technology."

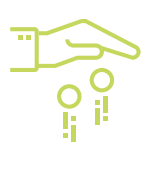
Experience with those technology projects has made organisations cautious towards rapid change and the accelerated adoption of new types of technology. Yet this has improved the industry's capabilities in rolling out new technology. It has also embedded the need for a strategic approach to investment.



\$187bn

big data market – up from \$126 billion in 2015


Information Week



\$3.1trn

cost of bad data in the US


IBM



60%

of the time, data scientists are cleaning and labelling data


Harvard Business Review



40zb

is estimated to be all the data created, replicated and consumed in the year 2020

EMC/IDC



>70%

of employees on average have data they should not

Harvard Business Review

"On technology, firms must not get ahead of themselves," says Mr Probert. "The development of a strong data culture is core. Smart CDOs are the ones who think and talk about four-to-five-year paths when deciding what to do. When they look to drive value throughout the chain and how to evolve potentially greater analytics, agreeing on clear data principles in their IT strategic roadmap is key to long-term success."

He notes that Capco believes that connected data drives business value. The implementation of programmes that by connecting data enable the CDO to drive a whole range of automation, customer services and offerings will transform the role. The CDO will move from building data management foundations to creating true value. The strength that many digital firms have access to good data and the capacity to run meaningful analytics across it will be a central element of the CDO role within financial services for the next five years.

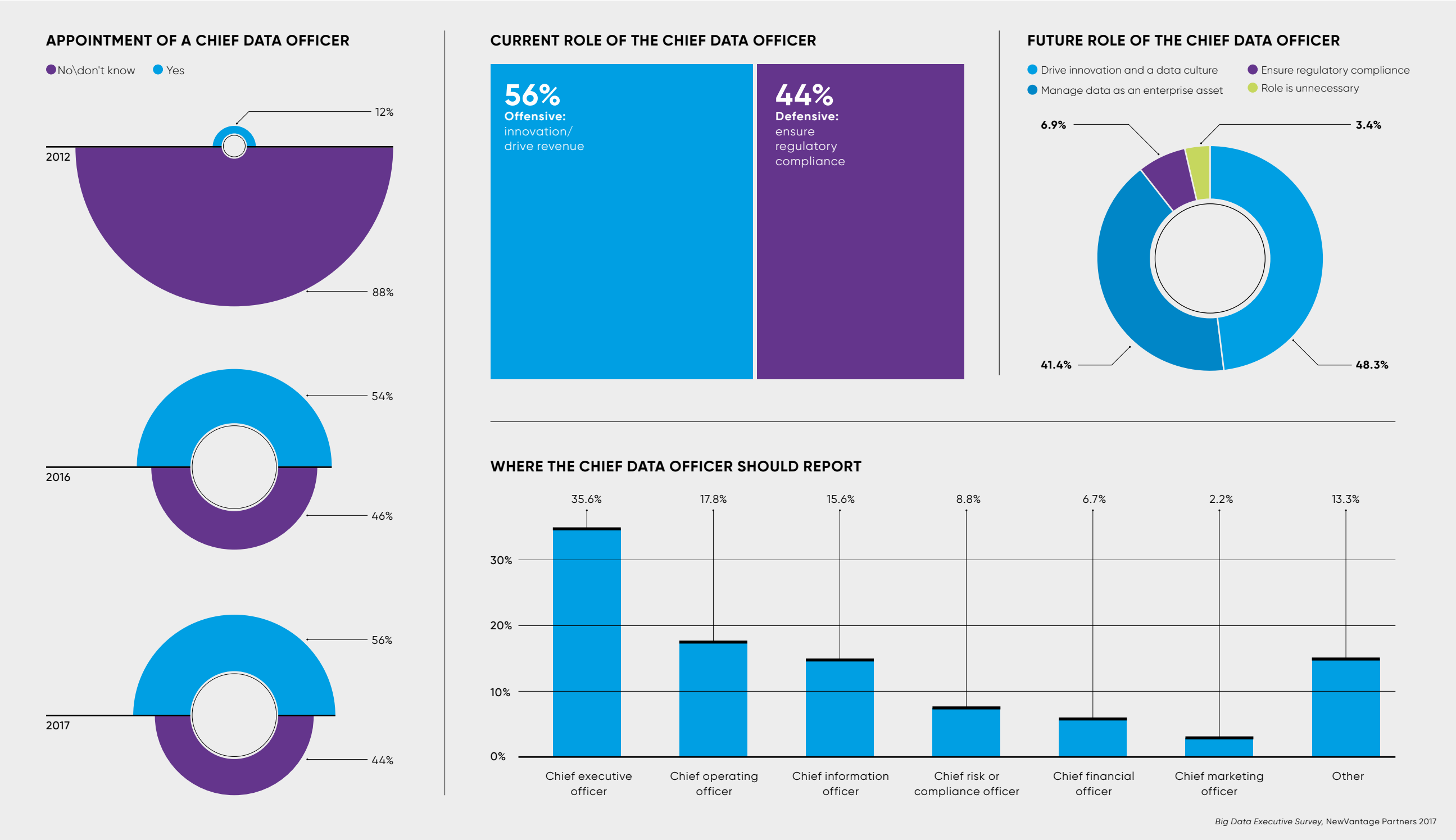
"Looking at a diagram of their job today, the CDO is 80 per cent data definitions, lineage and quality," says Mr Probert. "We will see that pivot to 20 per cent of the role, with 80 per cent being analytics and driving value from data."

CDOs will need to find that middle ground between business and IT to engage effectively with the business, and be able to communicate effectively with them both.

"IT looks at the landscape and architecture, and how the systems are put together. The business focuses on parts that help them hit targets," says Mr Bergquist. "I think the CDO needs to consider finding that common language around data and how it is shared within the organisation, so irrespective if you talk to IT or talk to the business side, you have a common understanding. Helping firms find this middle ground to drive true value is the big challenge we focus on helping our clients with."

Mr Probert adds: "If CDOs can't find this balance then they will quickly lose their unique position."

For more information please visit www.capco.com



Q&A What makes an effective chief data officer?

James Arnett, partner at Capco, explains the key skills, structures and powers that enable a chief data officer (CDO) to build a new way of working

Where do you see the most effective CDOs?

Pharmaceutical, retail and some modern technology firms are more advanced in the way they use data than financial services. But the role of the CDO, in financial services, has risen significantly in importance over the last two to three years. Many firms are now starting to realise that they do need a CDO and are establishing this function within their companies. CDOs are already helping companies to use data more effectively. For example, they are creating data management functions, data ecosystems and linking these parts up.

How has the CDO's position within business changed as that evolution progresses?

Legacy data management roles have typi-

cally settled in IT and have been misaligned, had limited scope or limited accountability. We are now seeing the new prominence of the data agenda is driving the CDO to a position in which they have their own mandate rather than operating at the behest of the chief technology, operating or risk officer.

So is it a transformation role?

It's not a transformational role, it's a foundational role to provide, inform and enable transformation. I think the CDO is going to be the powerful function that will enable the kind of transformation which was not possible in the past.

How has the pressure to report data to regulators contributed to this?

Understanding data front to back is enabling companies to make both business and compliance decisions. And it's allowing them to have conversations with their regulators about what good data management looks like. It's also helping companies to decide what business they do and do not want to do. So it's given them more control. One of our clients has off-boarded and exited certain markets because they used data analysis effectively to analyse their business. Others have decided to push further into different business areas because they realise they still have the potential to expand or

they are able to have a more sensible conversation with their regulator.

What tangible impact will a data-enabled bank have over its rivals?

Five or ten years ago, the high street banks had difficulty offering their whole product suite because data wasn't shared effectively across the bank. Siloed technology and legacy information means, even today, this is still the case at many banks. New technologies and the need to serve clients digitally has made them realise the power of data, and the importance of sharing and managing data across silos to make effective business decisions.

How does that affect the customer?

From the customers' perspective firms that get better access to data, or get real time data, can offer new digital platforms, new services and increase offerings across different markets. Anything that you as a customer might expect, everything from really personalised retail experience, to moving assets in a very straightforward way, to seeing wealth getting moved from one generation to the next is predicated on the financial services firms having really good data. Without good data, banks are going to struggle to meet your expectations. The role of the CDO will be a key enabler for the digital offerings that

banks need to provide to keep relevant and survive in a modern economy.

Are incumbent banks at risk from newer rivals that are more data literate?

Yes and no. Newer banks are not limited in the same way as incumbents that tend to have longstanding legacy systems. This makes the transition to new technologies easier. However, even though incumbent banks were slower to move on the utilisation of data, we are now seeing adoption among some of the larger banks as well as the new challenger banks. They are now learning how to use different data sources, including datasets that are available out in the wider world, such as on social media. How they use that kind of technology to go to market and the market segments they offer in the digital space for banking are very interesting concepts.

Where are the larger firms in the process of adoption?

I think the use of different technologies, for example how to use cloud, how to use the processing power, is a journey. I know a certain number of banks that are trying different elements of new technologies in a private space. The biggest challenge I see with our client base is the deployment of these new technologies, which are in their infancy or are evolving in themselves, while competing with



JAMES ARNETT
PARTNER, CAPCO

the wave of regulation. A lot of the solutions that are developing to handle capital market regulations are being driven around developing data lake concepts in which vast amounts of raw data are held in their original form. Deploying new technology solutions while delivering at the same time is a big challenge. It takes strong leadership and strategic thinking on the part of the CDO to walk the fine line between meeting short-term compliance milestones and doing what is right for their organisation strategically in the long term.

EU regulations will affect UK financial firms

Despite Brexit new European Union regulations governing data protection are set to impact the UK’s financial services sector

DAVEY WINDER

With the EU General Data Protection Regulation (GDPR) taking effect in the UK from May 25, 2018, it’s no surprise that the financial services sector has seen data protection driven up the agenda at banks and insurance providers. But what impact are data privacy auditing and compliance issues having on the broader financial services ecosystem?

While GDPR dominates the data privacy regulation headlines, it’s not the only acronym in town. The revised Payment Services Directive (PSD2) was passed by the Council of the European Union on November 16, 2015 giving member states two years to incorporate the directive into national regulatory regimes, to improve protection of consumers when they pay online. As such, some within the broader financial services ecosystem have seen a growing tension between GDPR and PSD2.

“Many financial institutions are embracing PSD2 and ‘open banking’ as a way of improving customer service, and to compete more effectively on price,” says Peter Ryan, a GDPR specialist with financial software vendor Temenos. “But with up to 4 per cent of global turnover or €20 million as a penalty, financial service companies are also taking a whole raft of measures which is having a knock-on effect on the way systems, processes and partnerships are delivered,” he says.

John Culkin, director of information management at Crown Records Management, agrees that the main change in data privacy regulation is from a reactive to a proactive emphasis. “While it used to be the case that businesses were required to protect data, there was not an explicit requirement for them to be overt about what they were using the data for,” Mr Culkin explains. Unless the issue was major, privacy breaches all too often went unreported as a result. “The new world requires businesses to practise privacy by design, be open and transparent with the data they have, and what it is going to be used it for,” he says.

Which is a good thing, for the consumer at least; but what about for the financial services providers themselves? That regulators have finally not only got teeth, but razor-sharp ones, has not gone unnoticed by the sector. “Businesses are now scrambling to put in processes and technology so they can care for any personal identifiable information appropriately, and be seen as taking data security seriously or risk punitive punishment,” says Iain Chidgey, vice president of international at Delphix.

This isn’t just about the banks and other financial services companies either; the broader ecosystem that encompasses third-party vendors and partners will also feel the impact of such regulation. So just how transformative and costly will the compliance process be?

With the financial services ecosystem arguably one of the most intricate networks of partners and third parties, vast amounts of data are generated and moved around

With the financial services ecosystem arguably one of the most intricate networks of partners and third parties, reliant on each other to make trades and financial deals happen almost instantaneously, vast amounts of data are generated and moved around.

“The impact of GDPR will be hugely transformational,” says Gordon Wilson, chief executive at financial software and services provider Advanced. “The pressure each financial services organisation faces is about needing to be assured that everyone in the supply chain complies with the legislation. Otherwise everyone can be liable legally and financially, as well as held accountable to the significant risk to brand reputation.”

This will, inevitably, come at a cost in both monetary and systems complexity terms. The upside, says Steven Hargreaves, UK head of capital markets with CAPCO, is that having full GDPR compliance will advance an organisation’s security posture. “Compliance will help in identifying both insider and external data breaches, and subsequent investigations, as data should be available immediately along with usage information and data flows,” he says.

Security posturing is a bonus, but the real issue for financial services organisations and their supply chain is achieving a single

view of a customer across all service offerings. “Organisations will need to ensure they know where personal data is being processed in their supply chain, and that those providing services on their behalf will be able to identify breaches quickly and report them,” warns Stephen Bailey, executive principal consultant at NCC Group.

This may be easier said than done in some parts of that supply chain. Take the call centre, for example, which is more often than not an outsourced operation. Ensuring that data handled here is stored properly and made available to legitimate customers upon request sounds like a straightforward requirement. Yet Andrew Lilley, director of sales and engineering, for Europe, the Middle East and Africa, at fraud detection company Pindrop, says: “Call centres are often neglected in protecting against data breaches and so it’s fraught with risk.”

He has a very good point because in the GDPR world view, data protection must be incorporated into the core of all business procedures, products and services across all channels. Not only that, Mr Lilley concludes, but “all employees will have to be aware of their obligation to protect consumer data across channels including the phone”.

So, the principles behind GDPR are not easy to argue with as everyone wants, or wants to be seen as caring about, data privacy in this age of increasingly more data-aware consumers.

Once buffered up next to the inarguable complexity of the financial services ecosystem, the practical implementation becomes a mountainous challenge that isn’t going to be easy to climb.

“All employees will have to be aware of their obligation to protect consumer data across channels including the phone

Mr Culkin nods in the direction of huge amounts of money already having been spent on the likes of the master data management concept, a single source of truth that was never quite fully implemented in real-world scenarios. Or how about another concept, that of know your customer that saw organisations invest in gathering personally identifiable information, which eventually proliferated out of control, courtesy of departments and functions morphing in unexpected ways and data ending up in organisational silos?

“GDPR will be transformative in that it puts the customers back at the centre and in control,” Mr Culkin insists, “but the downside for companies is they have to be able to find the right data, ensure it is accurate, portable or even be able to delete it, all while meeting other regulatory requirements.” The biggest challenge, however, is not a technical one as the technologies already exist in abundance. “The challenge is understanding the business and the processes within it, along with how people interact with information,” he adds.

And if that sounds like one big headache in the making, that’s because it is. But the end-game has to be compliance and that should deliver better services.

“Yes, this will be transformative, but in a good way,” says Sue MacLure, head of data at customer engagement agency PSONA. Her argument being that while we know the cost implications of getting it wrong will speak to the driver at the heart of financial services brands – bottom-line performance – we don’t know the potential brand implications of getting it wrong.

Financial services aren’t traditionally very good at knowing what getting it wrong looks like, says Ms MacLure, and having multiple vendors and partners makes it harder to control brand perception. “Especially when those relationships are not all owned centrally and will need a single version of operating processes,” she says. There will inevitably be more pressure to identify either one source of “data truth” or at least one central source of “process truth”. “Either way, in a very regulated world, it layers in a new degree of demonstrable scrutiny and extends it to the less regulated parts of the business,” Ms MacLure concludes.



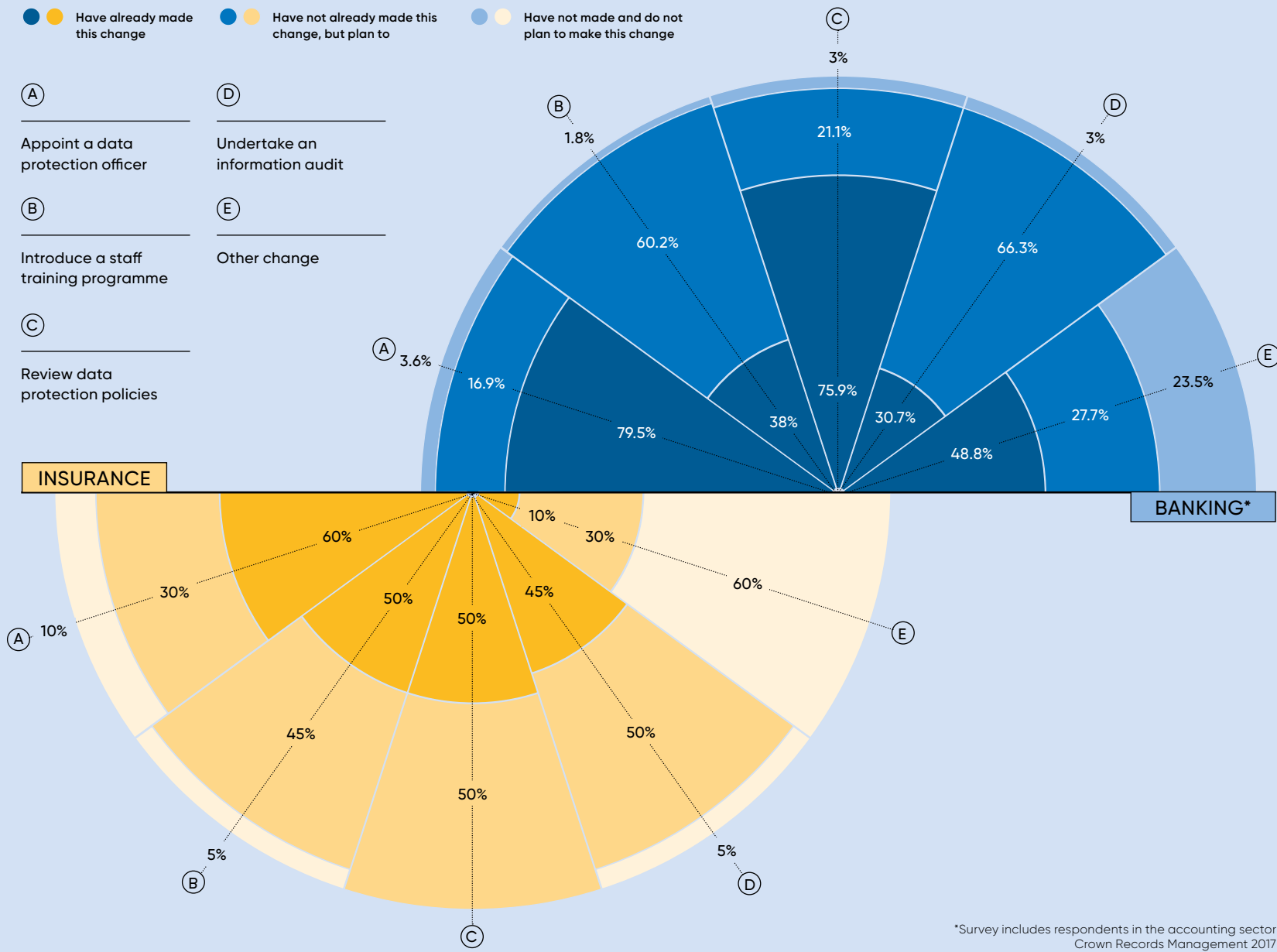
54%

of banking professionals are worried about getting their reporting structure in place for GDPR

Delphix 2016

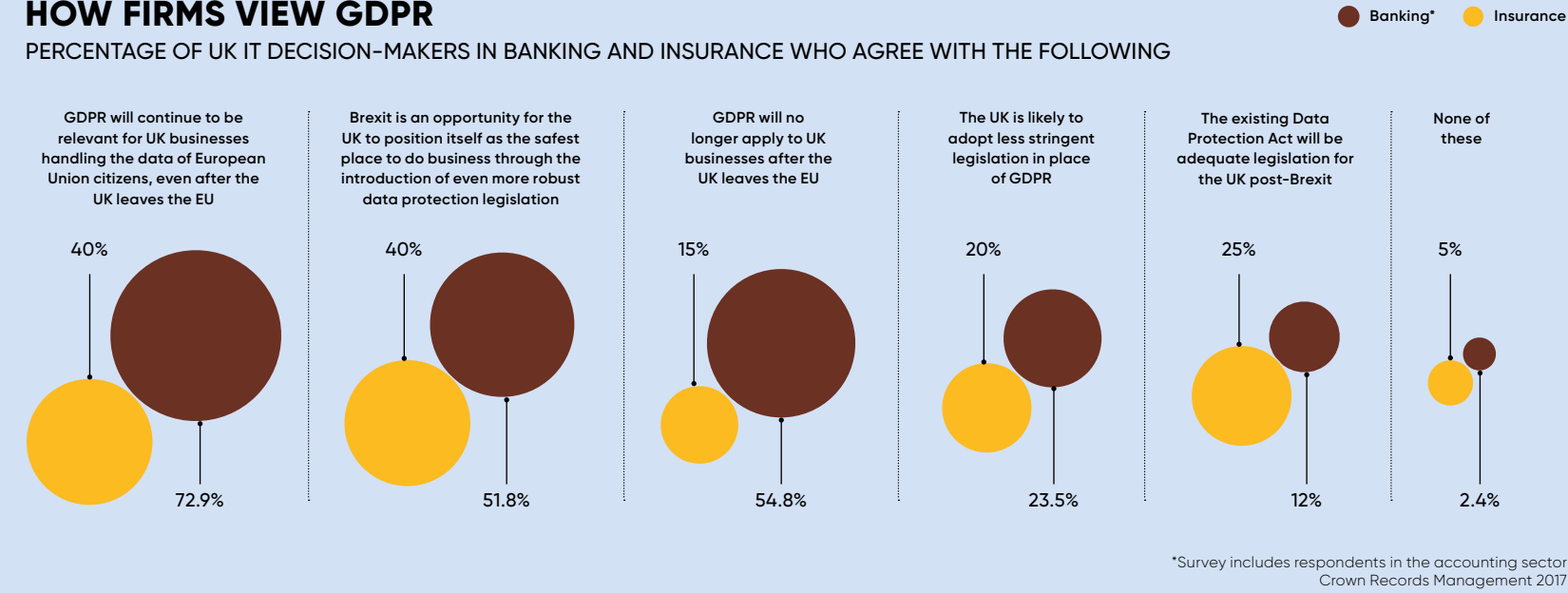
HOW FIRMS HAVE CHANGED DATA PROTECTION IN PREPARATION FOR GDPR

UK SURVEY OF IT DECISION-MAKERS IN BANKING AND INSURANCE



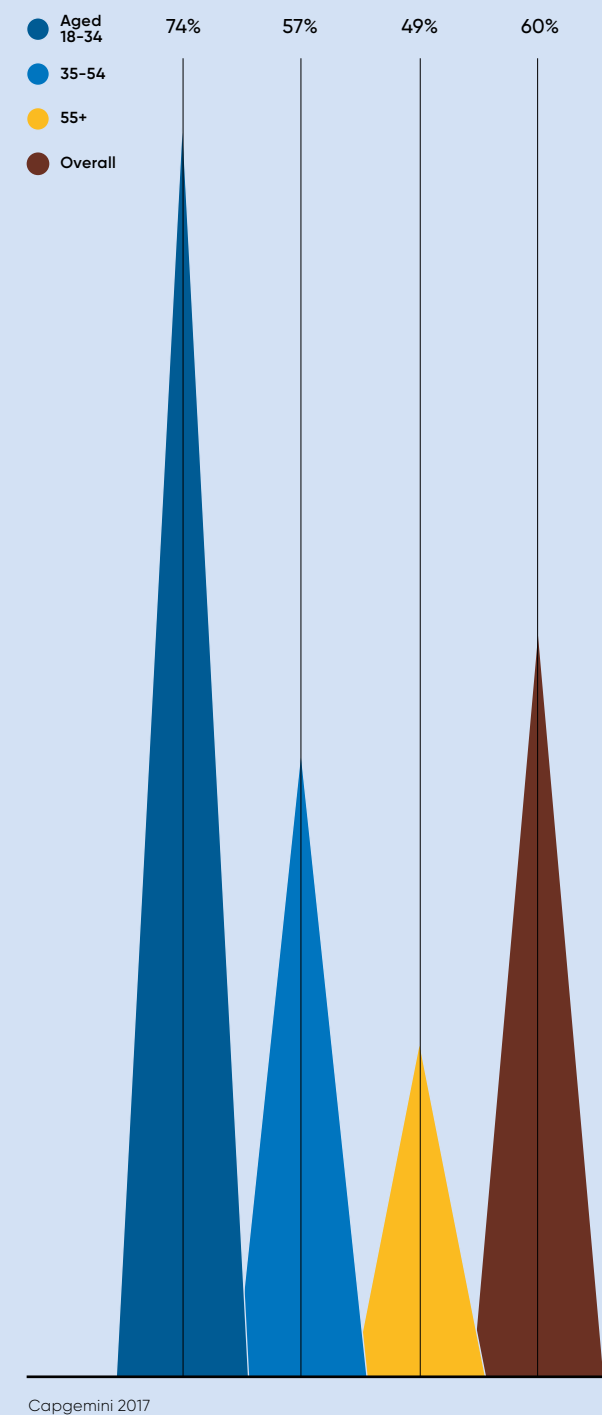
HOW FIRMS VIEW GDPR

PERCENTAGE OF UK IT DECISION-MAKERS IN BANKING AND INSURANCE WHO AGREE WITH THE FOLLOWING



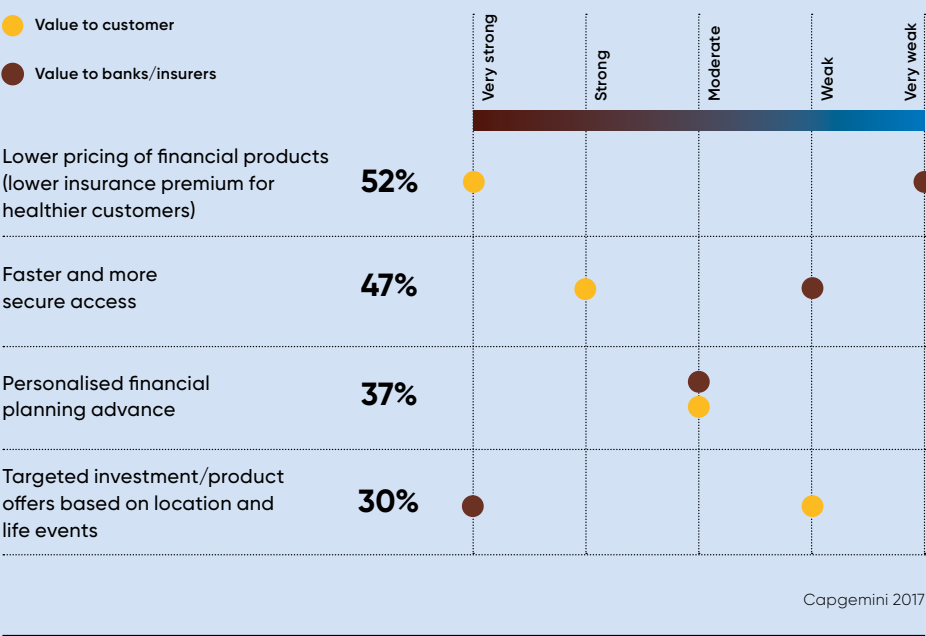
HOW CONSUMERS FEEL ABOUT DATA SHARING

PERCENTAGE OF GLOBAL CONSUMERS WHO ARE WILLING TO SHARE DATA WITH BANKS/INSURERS



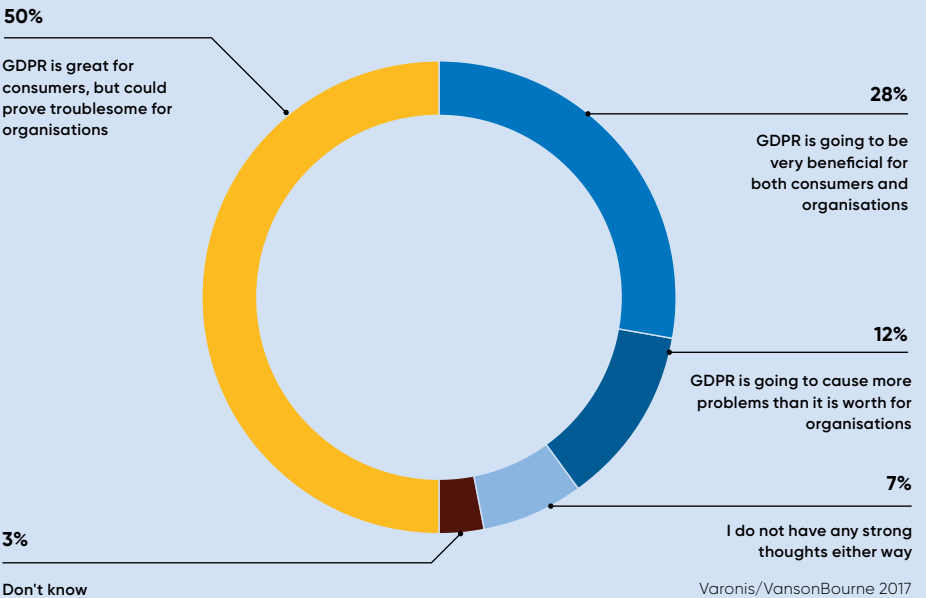
WILLINGNESS TO TRADE PRIVACY FOR A BETTER SERVICE

GLOBAL SURVEY OF CONSUMERS (% WILLING TO SHARE DATA)



IMPACT OF GDPR ON THE FINANCIAL SERVICES SECTOR

SURVEY OF EUROPEAN AND US IT DECISION-MAKERS IN THE SECTOR



COMMERCIAL FEATURE



Safety and surveillance: how far will the UK's newly proposed data protection laws go?

Recent terrorist attacks in Manchester and London have raised the issue of surveillance, and the need for law enforcement agencies to monitor suspects to protect us from harm – but how much will this influence the new data laws proposed in the Queen’s Speech?

**ADDLESHAW
GODDARD**

According to Toni Vitale, head of data and information law at Addleshaw Goddard: “We have an opportunity to modernise our data protection laws and make them fit for a 21st-century connected world, and to strike the right balance between protecting the rights and freedoms of individuals and protecting them from harm, such as terrorism.”

One eye-catching new law will give young people the right to demand that social networks delete any personal data they shared prior to turning 18.

The government also says it will implement the General Data Protection Regulation (GDPR), a series of new European Union data protection rules due to come into force in 2018, which will replace the Data Protection Act 1998.

“The new law will ensure the country meets its obligations while a member of the EU and will help the UK maintain its ability to share data with other EU member states, and internationally, after we leave the EU,” says Mr Vitale.

The government has stated that the new legislation will ensure “the United Kingdom retains its world-class regime protecting personal data”.

Mr Vitale says: “Some might regard that comment as ironic. In fact, the EU Commission has frequently complained that the UK’s current data protection law failed properly to bring into law about one third of the EU Data Protection Directive (1995), such as the definition of personal data and ‘relevant filing system’, the collection of personal data in job applications and the ability to claim damages from a data controller in the event of a breach.”

“In addition, in 2002, a survey of privacy conditions in 50 countries, carried out by Privacy International, singled out the UK for criticism over a series of law enforcement measures, which the authors said had undermined civil liberties.”

The report concluded: “There is, at some levels, a strong public recognition and defence of privacy... On the other hand, crime and public order laws passed in recent years have placed substantial limitations

on numerous rights, including freedom of assembly, privacy, freedom of movement, the right of silence and freedom of speech.”

Mr Vitale says: “In short, according to the Electronic Privacy Information Centre, Britain has one of the worst, rather than one of the best, records in the developed world for protecting the privacy of its citizens.”

The furore which last year surrounded the passing of the Investigatory Powers Act, the so-called Snoopers’ Charter requiring internet service providers and mobile operators to retain and allow government access to certain types of data, led to criticism from the government’s own data watchdog, the Information Commissioner’s Office (ICO). This is particularly prescient with regard to prime minister Theresa May’s “Enough is enough” comments. Delivered outside 10 Downing Street in the aftermath of recent terror attacks, her remarks outlined cracking down on social media operators and suggested the government should be permitted to circumvent encryption.

“It will be a tough balancing act to ensure citizens’ rights, protect their liberty, keep them safe and make sure we remain competitive

“If the possible obligations surround the weakening or circumvention of encryption, then this is matter of real concern,” the ICO said. “The ICO has stressed the importance of encryption to guard against the compromise of personal information. Weakening encryption can have significant consequences for individuals.”

Mr Vitale asks: “Will the government have the political collateral to seize the opportunity to thoroughly update our data laws, and will it strike the right balance between protecting citizens’ rights and preventing future terrorist attacks?



“If you look at what the government has promised, it feels a little like they are doing the minimum necessary, rather than undertaking a route-and-branch review.”

The government has promised to establish a new data protection regime for non-law enforcement data processing, replacing the Data Protection Act 1998; strengthen rights and empower individuals to have more control over their personal data, including a right to be forgotten when individuals no longer want their data to be processed, provided there are no legitimate grounds for retaining it; modernise and update the regime for data processing by law enforcement agencies; and update the powers and sanctions available to the prime minister.

“To some extent the government’s hands are tied by having to implement GDPR,” says Mr Vitale. “For example, the proposal for a ‘right to be forgotten’ when you turn 18 is not an original idea dreamt up by the UK government, although it is one of the few policies to survive the trashing of its manifesto. It was first considered in 2010, when a Spanish citizen lodged a complaint against a Spanish newspaper and Google. He complained that an auction notice of his repossessed home on Google’s search results infringed his privacy rights, because the proceedings had been fully resolved for a number of years and the reference to these was entirely irrelevant.”

The GDPR allows people to request that data is erased when it is no longer needed or if they withdraw consent. “The right mentioned in the Queen’s Speech appears to go slightly further, requiring companies to erase all data on request when a teenager turns 18. The exact details of this new provision and how it will be enforced remain uncertain,” says Mr Vitale.

Even if the government had not listed the new data protection laws in the Queen’s Speech, GDPR would apply from May 2018 in any case, because it is a regulation applying automatically to all 28 EU member states. “The key thing will be what happens after May 2019 when we leave the EU,” says Mr Vitale.

“We have choices, depending on whether we retain the whole of the GDPR or try to water it down – the so-called hard and soft Brexit options. If we make the wrong choice, it could harm UK business by making it harder to transfer data with Europe and this might have a knock-on effect on attracting inward investment. After all, if you were seeking to locate a data centre in a business-friendly English-speaking country in the EU, why would you choose the UK over Ireland?”

“A challenge for the UK government is to ensure our data laws match those of Europe, so that we can continue to transfer data back and forth, and give our citizens the same rights as others enjoy in Europe, and resist the temptation to make the UK a business-friendly offshoring data haven or hub with weakened protection. It will be a tough balancing act to ensure citizens’ rights, protect their liberty, keep them safe and make sure we remain competitive.”

For more information please visit addleshawgoddard.com

WEALTH MANAGEMENT

Doing deals with ‘honest’ robo-advisers

Robo-advisers are lying in wait to pick off clients from traditional wealth management firms which must modernise or face an uncertain future in a data-driven world

IAN FRASER

The ticking of an antique clock in the oak-panelled boardroom may provide customers of traditional wealth management firms with the reassurance they need as they commit to buying emerging-market equities, Silicon Valley technology stocks, Venezuelan bonds or whatever else their pinstriped adviser is recommending that day.

However, for proponents of low-cost digital and automated investment adviser services, sometimes called robo-advisers, this is an outdated and expensive model that’s past its sell-by date.

A data-driven revolution is sweeping through the investment industry and firms that fail to recognise it risk losing business to more fleet-footed digital rivals as their wealthy clientele grow increasingly comfortable with the use of new technologies when making their investments.

Survey after survey shows that millennials, and indeed most potential investors aged under the age of 60, are happy to entrust their savings to a digital platform or mobile app, so long as it’s credible, secure, trustworthy, capable of offering them a range of low-cost funds and some personal investment advice.

“The robo-advisers are predominantly targeting ‘Henrys’ or ‘high earners (who are) not rich yet’

“The idea that you have got to become best friends with a man with cufflinks and an expensive watch to get financial advice is becoming harder and harder for people to swallow,” says Mark Polson, founder and principal of specialist consultancy The Lang Cat.

The robo-advisers – essentially websites that rely on online questionnaires, artificial intelligence and algorithms to steer clients into appropriate, low-cost investment portfolios – are, at the moment, predominantly targeting what the *Financial Times* calls “Henrys” or “high earners (who are) not rich yet”.

They’re doing this by undercutting traditional wealth managers on cost, ease of use and minimum sums invested. Adopting

mantras like “We’re democratising wealth management”, such players generally steer their clients into low-cost exchange-traded funds, which are able to mirror the movements of stock market indices at a fraction of the cost of active funds.

Some believe that these robots are going to be able to storm the citadels of wealth management simply because they are more honest and reliable than fallible human beings.

Kunal Bajaj, founder and chief executive of Mumbai-based Clearfunds, says using technology to crunch financial data, automate processes and eliminate excesses – “the fancy lunches, the plush offices and the overpaid staff” – reduces the risk that investors will be “cheated into products that are too expensive or not right for them”. In a recent blog post on his firm’s website, Mr Bajaj says “a good robo-adviser is transparent, unconflicted and unimpeded by human biases and prejudices”.

Robo-advisers are also being given a leg-up by the authorities. Both the UK’s Financial Conduct Authority (FCA) and Treasury see them as a means of plugging the advice gap that is currently bedevilling the UK investment market, and which has widened since the banning of commissioned-based selling in 2012.

Under new chief executive Andrew Bailey, the FCA appears to have traditional wealth managers and asset managers in its sights. In a barnstorming *Asset Management Market Study Interim Report*, published last November, the regulator as good as accused traditional players of colluding to rip off their customers. The FCA set out a package of proposed reforms including a strengthened duty on asset managers to act in investors’ best interests, the introduction of an all-in fee and measures to boost transparency.

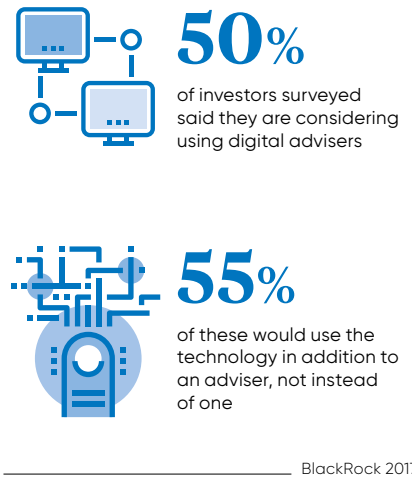
However, there is scepticism in some quarters about the scope for robo-advisers to disrupt the wealth management sector. The problem facing the robos isn’t technology, building cool stuff, having good ideas or even managing money, it’s finding customers. And the cost of acquisition per client in that sector is way too high. It’s up to hundreds of pounds per client. Many of these firms will be lucky to make their money back, ever.

There are also worries of how they will cope in a bear market, when investors are seen as needing more hand holding, as well as their inability to take tax planning and succession planning into account.

The robo-advisers, which only really came into being after the financial crisis of 2007-9, are still quite small beer in the ocean of money. Mr Polson says that in the UK they have, at most, a combined £1 billion in assets under management. That compares with a wealth management sector that has

These players are following in the footsteps of more established firms in the United States, including Betterment, which was launched in 2010, and Wealthfront, launched in 2013. They already have, respectively, \$8.9 billion and \$5 billion in assets under management. Analysts at Citigroup predict globally robo-advisers will be managing \$5 trillion over the next decade.

Schroders, with £375 billion in assets under management, seems to be more alert to the risks posed by the rise of the robos than some of its peers. Among the strategic risks it lists in its 2016 annual report is “increased investment and asset allocation through robo-advice services, displacing active management”. Schroders says it has sought to mitigate this by embarking on a



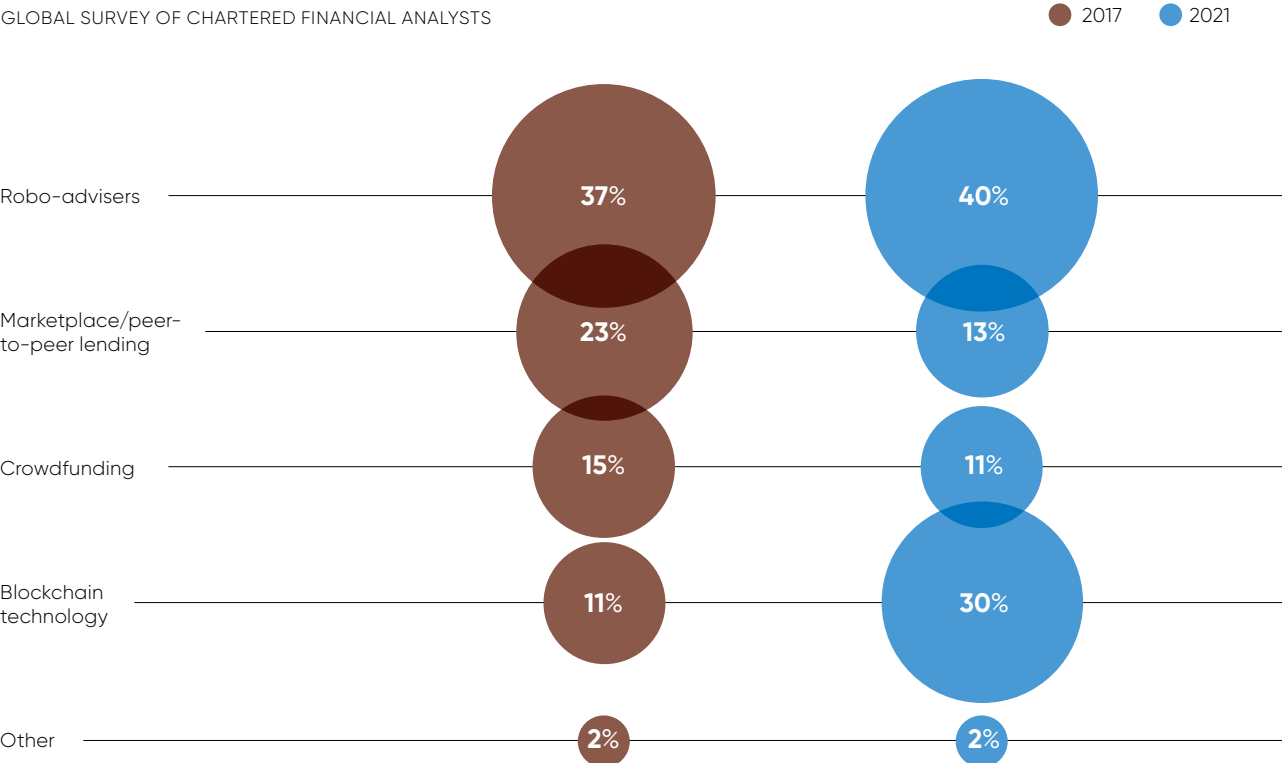
more than £550 billion of assets. “The disruptors are doing some really interesting and exciting things but, outside the commentariat, they have yet to make a serious dent in the market,” he says.

Of the robo-advisers in the UK, the largest is Nutmeg. Launched in 2012, it has so far raised £71 million in five funding rounds from venture capitalists and others. Nutmeg has more than £600 million under management, though it remains loss making, and escalating marketing and advertising costs meant that in 2015 its losses widened from 2014. It also last year lost its founder and chief executive Nick Hungerford, though he remains as a non-executive director. Earlier this year Nutmeg trimmed fees. These now stand at 0.75 per cent on the first £25,000 invested and 0.5 per cent on portfolios worth more than £100,000.

Other UK players include Wealthify, launched in 2015; MoneyFarm, launched in Italy in 2012, and in the UK in 2016; and Scaleable Capital, launched in 2016.

GREATEST IMPACT ON FINANCIAL SERVICES

GLOBAL SURVEY OF CHARTERED FINANCIAL ANALYSTS





UBS has developed SmartWealth, an online investment platform which is designed to appeal to younger investors

BlackRock spent a reported \$150 to \$200 million to buy robo-advisory firm FutureAdvisor in 2015



Daniel Acker/Bloomberg via Getty Images

Services to the US market in May 2015, is launching something similar in the UK, though this will not technically be a robo-adviser as it will only sell Vanguard's own bunch of tracker funds. Mr Polson predicts that because of low annual management charges of just 0.15 per cent, Vanguard's UK product will be "as disruptive as all the robos put together".



Anybody who doesn't have some degree of automation and a decent online user experience will find themselves marginalised

So what should traditional wealth managers be doing to see off the threat? Mr Polson says there are three main things. "If they're serious about fending off these upstarts, they're going to have to improve their transparency. They suck at transparency," he says. "Secondly, they're going to have to improve their customer experience; wood-panelled rooms, expensive wristwatches and chocolate biscuits are one thing, but I can get on to Scaleable Capital's website on my iPad and have an experience that looks like it's from 2017 as opposed to 1926. Thirdly, they're going to have to react to fee pressure and the only way to do that is to demonstrate value."

He predicts that in future the robo sector will no longer be regarded as a discrete area of the investment market "If we look forward five years, what we understand as robo will just become part of what people do, and you'll be able to mix online and offline and transact in a way that suits you best," Mr Polson concludes. "Anybody who doesn't have some degree of automation and a decent online user experience will find themselves marginalised into a shrinking, very traditional space."

CASE STUDY
SILO



Zoe Zambakides

For the past year, London-based stockbroker Killik & Co has been developing Silo, an online service that enables investors to access a range of funds for a minimum monthly investment of just £25. That compares with a minimum of £200 a month for investors wishing to access the firm's multi-manager funds.

Killik describes the product as "an app that effortlessly saves and invests while you live your life" and as "the first intelligent save-and-invest app". Fees start at £1 a month and rise to no more than 0.75 per cent of funds invested.

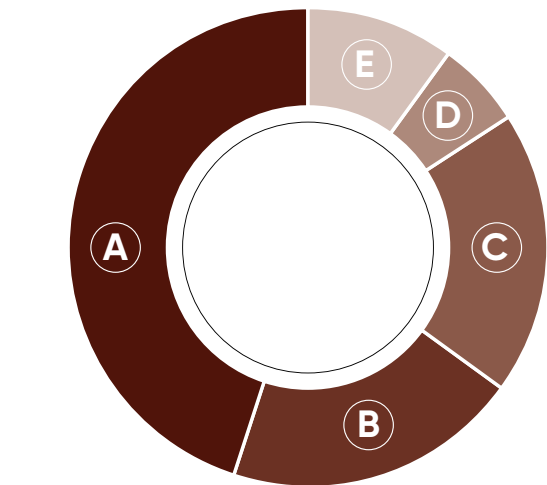
The private client firm's head of savings solutions Zoe Zambakides says: "The idea is if you can make it as easy to impulse save as it is to impulse spend, then you're on to a winner," adding that the aim is to make the benefits of investment available to all. "Thirty years ago

that could be done through having branches, but today it can be done through apps," she says.

Ms Zambakides says Silo is beautifully designed to work out "how much cash you can afford to save without you even noticing". The app does this by linking to people's bank accounts and, using algorithms and deep machine-learning, gets more intelligent over time. She says: "We're focused on the person who has no time, who has limited understanding of investing, who needs to trust someone, but doesn't want to be infantilised. We're focused on that person whether they're 55 and on their last sprint towards retirement savings or 20 and knowing they have to save at the same time as paying off those student loans."

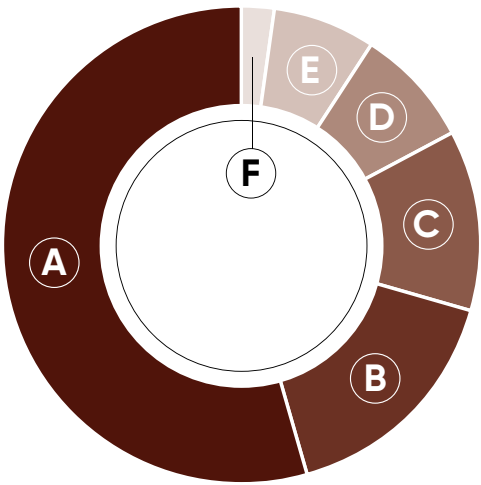
Silo is about to go into beta testing and is due to be launched to the general public this September.

WILLINGNESS TO BUY INVESTMENTS ONLINE
SURVEY OF 28,000 INVESTORS ACROSS 18 COUNTRIES



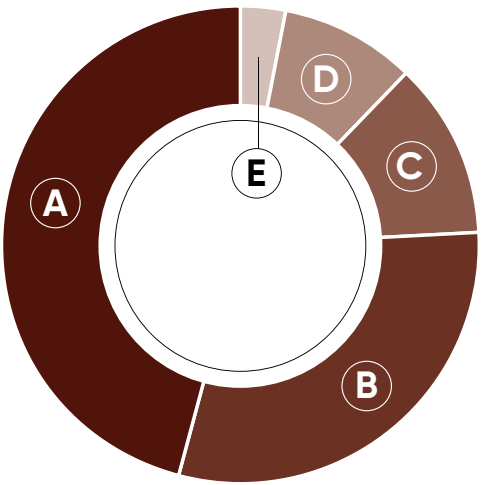
- A 45%**
Yes, would/always do
- B 20%**
Yes, if adviser is available
- C 19%**
Yes, if from a trusted brand
- D 6%**
Yes, but after speaking to adviser
- E 10%**
No, would not invest online

SECTORS MOST AFFECTED BY AUTOMATED FINANCIAL TOOLS
GLOBAL SURVEY OF CHARTERED FINANCIAL ANALYSTS



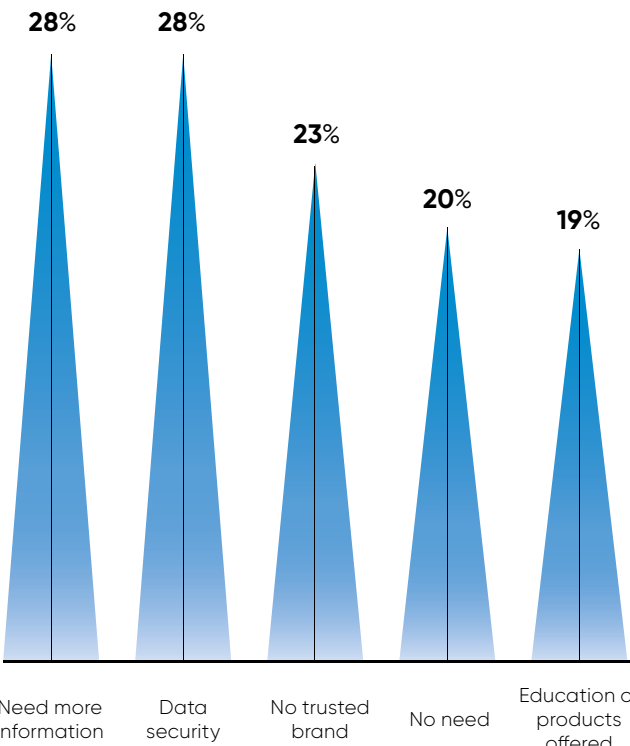
- A 54%**
Asset management
- B 16%**
Banking
- C 12%**
Securities
- D 8%**
Insurance
- E 7%**
Other
- F 2%**
None of these

BIGGEST RISK INTRODUCED BY AUTOMATED FINANCIAL TOOLS
GLOBAL SURVEY OF CHARTERED FINANCIAL ANALYSTS



- A 45%**
Flaws in the automated financial advice algorithms
- B 20%**
Mis-selling of financial advice
- C 19%**
Privacy and data protection concerns
- D 6%**
Other
- E 10%**
None of these

BARRIERS AGAINST USING DIGITAL ADVISERS
SURVEY OF 28,000 INVESTORS ACROSS 18 COUNTRIES



- Need more information
- Data security
- No trusted brand
- No need
- Education of products offered

Driving change: it starts with your data

Data is fast becoming the new currency of the business world



Some of the world’s largest companies, Apple, Amazon, Facebook and Google, are experts in gathering and deriving insights from data. The importance of data is soaring. IDC predicts that by 2025 the amount of global data will grow to 163 zettabytes. That’s ten times the amount generated in 2016.

Yet, in the financial world, firms are already unable to handle the data at current levels.

Firms are having to fall back on manual processes, including large teams of people working on spreadsheets. At countless organisations the only way to spot errors in data silos remains the archaic method of paper and a high-lighter pen. Alternatively, huge budgets are sunk into enterprise systems that take months to deploy and still fail to deal with complex, unstructured data. Something needs to change.

SCALE OF THE CHALLENGE

“It’s incredible, isn’t it?” says Dr Christian Nentwich, co-founder and chief executive of Duco, a company focused on providing the solution. “This is 2017 and we still have paper and pen to find errors. The general public would be horrified.”

Some companies think the answer lies in Excel or commissioning a bespoke software tool. “You’ll see companies ring up their favourite consultancy and ask for a reconciliation system which is supposed to do the job,” says Dr Nentwich. “They cost millions and yet you still wind up with people working manually.”

The reason the industry finds it so hard to find the right solution is that the job is genuinely difficult. The IT systems involved are numerous. Each has its quirks. Engineering a tool for each and every one is laborious.

Furthermore, there are so many tasks. There’s compliance, post-trade reconciliation, counter-party datasets, migration projects, data preparation and so on.

This explains why there is such excitement around machine-learning. The ideal solution is a self-learning tool which can map on to any dataset, learn the layout and automate the entire error-discovery process.

In 2010, Dr Nentwich and Michael Marconi, a fellow computer scientist, founded Duco to create such a system. The company’s flagship product, Duco Cube, is used by financial institutions globally to handle error detection. Machine-learning lies at its heart.

“Duco Cube compares data,” says Dr Nentwich. “It learns what the data is and how it is formatted. Then it finds inconsistencies and immediately presents the results in an intuitive way. Everything is automated.”

The approach is uniquely versatile. It is possible to apply the same methodology to a dizzying variety of data tasks. “We focused first on reconciliation,” says Dr Nentwich. “We have ten major banks on the platform. But we work equally well with data preparation and normalisation.”

Alongside banks, the platform is used by brokers, asset managers, hedge funds, fund administrators, service providers and exchanges – any firm that needs to manage complex data.

There are applications in the medical sector, in retail and in logistics. “We are astonished to see how our system gets used,” says Dr Nentwich. “The secret is that we are not hard coded to a single application. We are more like a Swiss army knife.”

PUT THE USER IN CHARGE

A critical factor in automating reconciliation and error detection is letting the end-user implement the system. With so many jobs to perform, any dependencies or bottlenecks can severely hamper the business. Duco Cube makes life simple for users via a hosted, web-based platform, which even non-technical people can implement. “It’s self-service,” says Dr Nentwich. “In no way do you need a computer science degree to use it.”

“Duco Cube is used by financial institutions globally to handle error detection. Machine-learning lies at its heart

The machine-learning algorithms operate in the background. Users are generally unaware anything clever is going on, merely that the system works.

The result is a fast, fully automated approach to post-trade reconciliation, error discovery, data preparation and other related jobs. According to Aite Group, the industry average for analysing, building and testing just one reconciliation process is more than 64 days. With Duco Cube it’s 2.4 hours.

“We’ve seen a big appetite for this sort of service,” says Dr Nentwich. “Our revenue is growing more than 100 per cent annually. We have offices in London, New York and Luxembourg, and clients on every continent.”

In March, Société Générale Bank & Trust (SGBT) announced it would be using the Duco Cube platform to automate securities, cash and internal system-to-system reconciliations. Yves Dupuy, chief information officer at SGBT, says: “With it we can set up and auto-



DR CHRISTIAN NENTWICH
CO-FOUNDER AND CHIEF EXECUTIVE
DUCO

mate a variety of processes with ease, without major development projects. The technology also introduces an additional degree of control, transparency and auditability across our business.”

Another tier-one bank deployed Duco Cube for regulatory requirements. A spokesman explains that their old system simply couldn’t handle the new challenges introduced by MiFID II (EU Markets in Financial Instruments Directive), EMIR (European Market Infrastructure Regulation) and US Dodd-Frank Wall Street Reform: “We had three of our largest regulatory reconciliations loaded on to the system, with 60 to 70 per cent of the data that needed to go on there, and the platform just ground to a halt.” The bank adopted Duco Cube.

A change manager concludes: “With Duco you just put in the two source files and the system does all the magic for you. With our old system that process would have taken me a few days, but I’ve just circumnavigated this by clicking on a button. That’s pretty amazing.”

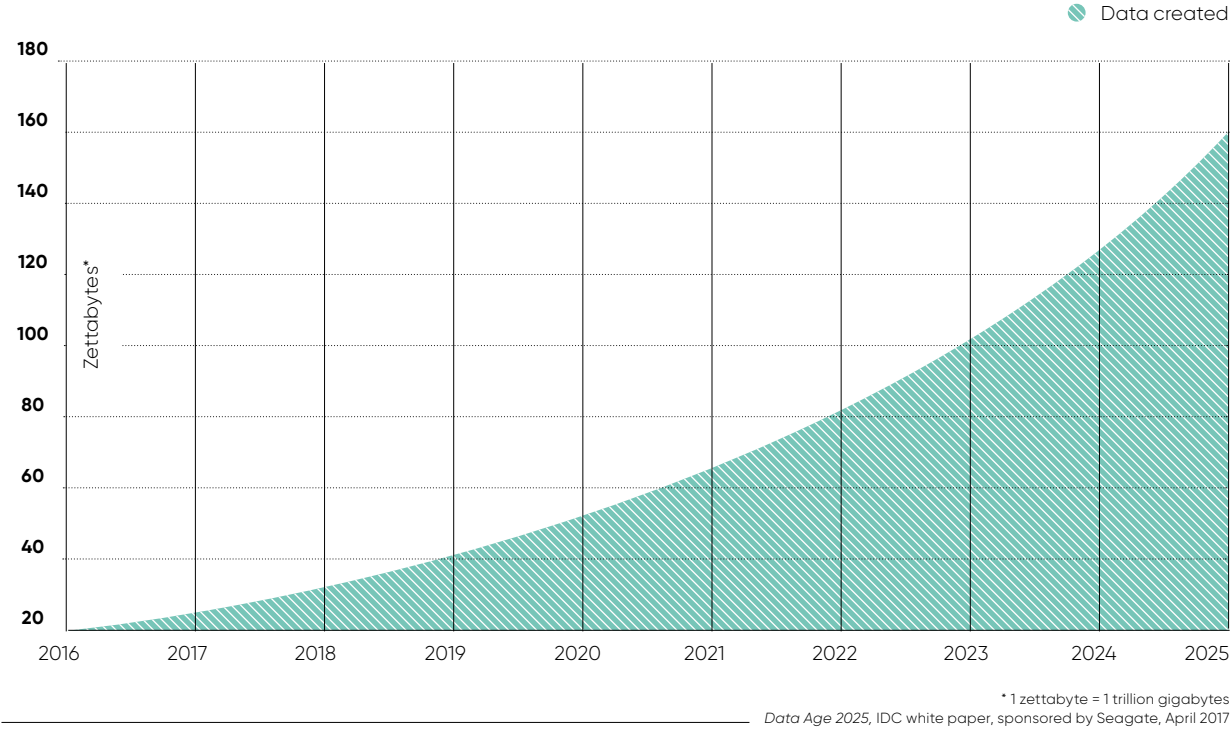
Cost pressure will only accelerate the demise of the old methods. A penalty for non-compliance can outweigh the entire cost of migrating to a machine-learning platform. Not to mention benefits of reduced risk and enhanced digital agility.

With the right data tools at their disposal, companies can analyse data to find more efficient ways of serving customers. It may even be possible to craft new business models and services. Strong data systems mean organisations have the insights and speed they need to outpace insurgents.

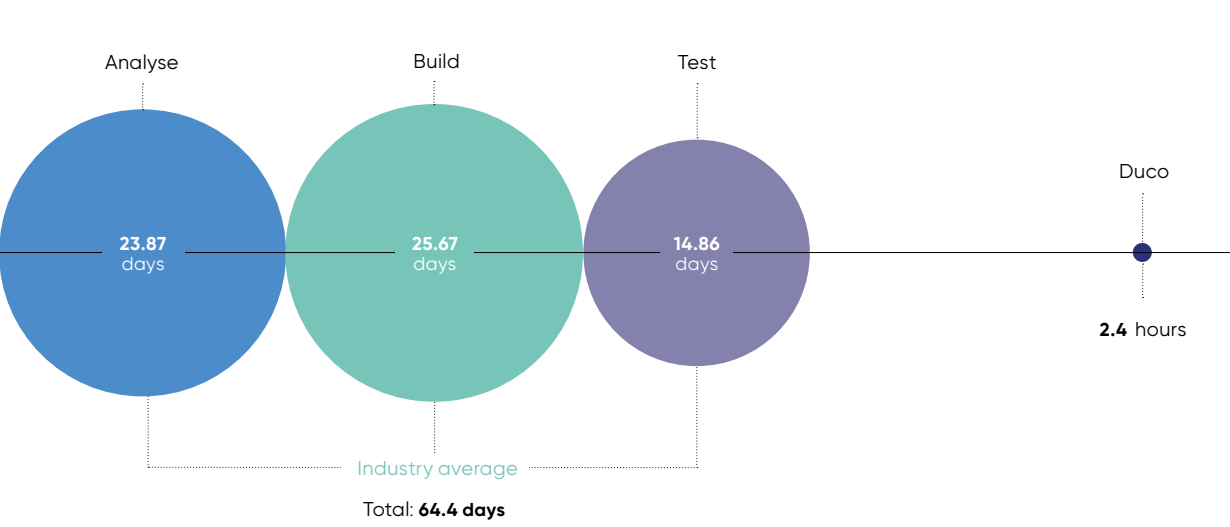
“Machine-learning and self-service applications are transforming this industry,” says Dr Nentwich. “They’ve taken some time to develop, but now they’re here it’s the only way to survive.”

To find out more please visit [du.co](#)

GLOBAL DATA GROWTH



AVERAGE TIME TO SET UP A NEW RECONCILIATION



Reconciliation Trends in 2016: Regulation and Nervous Recs, Aite Group

AUTOMATION

Trusting data-rich machines with money and investments

Automating the management of money poses difficult challenges which must be overcome by creating trust and transparency

DAN BARNES

“We are still in the tail of the third industrial or digital revolution where investment in digitalisation could drive significant productivity gains,” noted analysts from investment bank Morgan Stanley in a September 2016 report entitled *Disruptions and productivity growth in the next decade of the digital revolution*.

The digital revolution represents the move towards data-driven business. The computerisation of business is continually generating vast quantities of data. That information is fuelling the use of automated decision-making systems within finance.

“I am very optimistic about where we are going,” says John Lowrey, global head of electronic markets in equities at Citi, the banking giant. “Training artificial intelligence systems requires large datasets. Those who have the most data are the most able to adapt to the new environment and of course the banks and investment banks have reams of data. By 2020 we will really see radical change in the environment.”

That change is very apparent in capital markets. While many people still think of traders as brightly jacketed men shouting in a trading pit, and a few think of men and women staring at screens while shouting into telephones, very few people picture a computer server clicking away, making millions of decisions.

This move towards automated trading, which began in the late-1990s and early-2000s, across the banking and asset management environment was driven by two factors. Firstly, traders cost a lot of money and are fallible, and so reducing their number reduced costs. Secondly, many of their simpler tasks were time consuming and ate into their ability to tackle complicated problems.

However, the first stages of automation were rule-based decision-making systems, algorithms that took an input and triggered an automated response. Any change in market circumstances required a platform to have its parameters altered.

Now smarter systems are being developed, capable of learning, which can be trained across datasets and then adapt to changes in circumstance. These can be applied to a considerable range of processes by innovative financial services firms.

Joseph Pinto, global chief operating officer at AXA Investment Managers, says: “We are looking at automation on three levels. Firstly, how can we use big data and eventually artificial intelligence to provide new signals for our portfolio managers? Secondly, we are using machine-learning processes or automation to process a lot of data on customers, for example movement of inflows, outflows and trying to anticipate customer behaviour. The third layer is more traditional, sitting down with our providers and ensuring they can automate their process to lower fees.”

These automated trading systems are not only getting smarter, but as wider datasets become available, machine-learning systems can be used to understand a wide variety of inputs. The inclusion of internet-enabled sensors within devices ranging



Bloomberg / Contributor/Getty Images

from cars to shipping containers to toasters is creating the internet of things, a vision of the physical world represented in data.

At the same time, the increased surveillance of every aspect of life, and the capacity of machines to search images and text as well as tables of figures, just as search engines do across the internet, creates the potential for running searches just as powerful across financially sensitive information.

Bartt Charles Kellerman, chief executive of hedge fund consulting firm Global Capital Acquisition, says: “In the past there was a guy with a counting device standing outside a concrete manufacturer, or outside a housing project, counting the number of trucks going in and out. That’s grown by leaps and bounds, so everything that moves is going to be monitored and fed into some centralised cloud, which is then going to be examined and cross-examined as a reflection of whether or not that data is going to impact a potential market move.”

These technologies are already much in

evidence outside of the financial services environment. From search engines to shopping assistants they are becoming increasingly prevalent. However, applying these to the management of money requires a considerable level of trust. Even smart automation requires oversight and risk management. Nor can there be a lack of transparency as regulators and investors both require insight into the decision-making process.

“These are complex ideas when you use automation just for the investment process, or deep-learning or machine-learning,” says Mr Pinto. “And you need a simple way to explain it to your customers; you cannot sell it as a black box for sure. That’s the big challenge. So we are investing time and effort in creating transparency for users and clients, including creating tools like data visualisation. We find it really makes a big difference. The past is littered with opaque technologies that, when difficult to diagnose, were quickly abandoned by clients.” ●

PROS AND CONS OF AUTOMATED TRADING SYSTEMS

PROS

- Minimise emotions and preserve discipline
- Ability to back-test algorithms against historical market data
- Achieve consistency
- Improved order entry speed
- Diversify trading – trade multiple accounts/strategies at one time to spread risk

CONS

- Mechanical and connectivity failures
 - Still requires monitoring
 - Over-optimisation when back-testing (excessive curve-fitting)
- Automated trading has the potential to revolutionise financial markets, but should not be considered as a complete substitute for carefully executed trading, and still requires monitoring

Investopedia

CASE STUDY NEX OPTIMISATION



Nex Group, formerly ICAP, has been looking at automation to further the post-trade and back-office services it provides to clients via NEX Optimisation division.

“A lot of automation we are providing is to make things more efficient for our clients,” says Chuck Ocheret, chief innovation officer at NEX Optimisation. “That’s been our main purpose.”

Ironically, the most interesting automation can sometimes involve the more day-to-day tasks. The development of computer code, particularly the testing process, can be automated. When the firm takes on data from its customers, NEX Optimisation can automate the mapping out of defined fields, to assess where they belong in its own dataset. Although lots of data formats are standardised, firms still manage to create unique interpretations of these standards.

Mr Ocheret says: “If you can automate those processes, learn from training sets how data is sent in and some of the weird variations that occur, then you can automate a lot of that stuff with relatively straightforward machine-learning.”

Where clients are sending data for a single specific service, automation can allow that data to be reused

for multiple purposes. A client may provide all their trade data to generate reports to the relevant regulators. Through the use of smart automation this could be used to run an evaluation or a reconciliation. “The broader the datasets, the more insight you can offer to the clients,” Mr Ocheret says.

This is reducing the need to throw people at a task, but is also creating situations in which people would not be able to perform due to the sheer volume of data.

David Thompson, chief operating officer at NEX Optimisation, says: “A fear around this kind of automation is that it’s going to get rid of jobs or positions, but actually there is a huge amount of additional opportunity, which is going to be provided by ensuring resources are focused where they add the most value.”

PERSONALISATION



Getting personal with customers is not just selling more services

Online banks, awash with data from their customers’ smartphones, are leading the way in personalising financial services

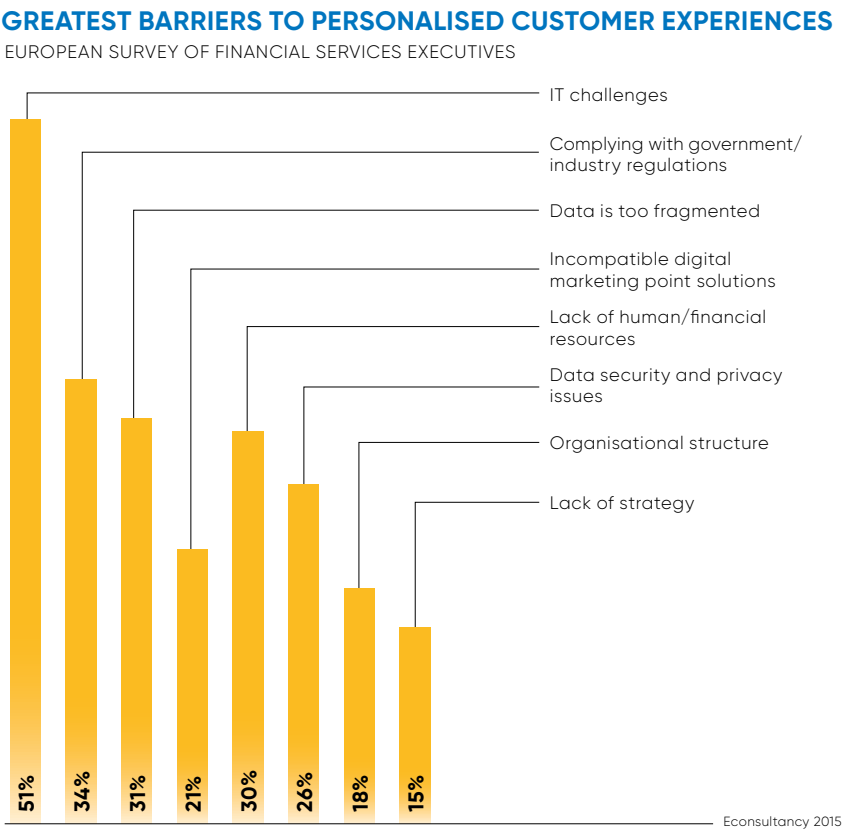
DAVID BENADY

Monzo Bank, the mobile-only banking service launched in 2015, is taking personalisation to a new level, according to chief executive and co-founder Tom Blomfield. The bank is using data on customers’ spending habits to advise them how to save money. For instance, the bank’s data shows that 30,000 customers use their Monzo cards for pay-as-you-go Transport for London trips on tubes and buses every day. “We have data on those people, we know where they live, we know where they travel to, we know how much they spend. We can suggest to these people that actually they

would be better off getting a year-long travel card and save a couple of hundred pounds,” says Mr Blomfield. Analysing data to help customers improve their finances will, he believes, be the future for financial services brands over coming years. Monzo offers customers financial advice based on their spending patterns and helps them to save money, budget responsibly and to find the best deals, he claims. For instance, its algorithms can tell when a customer has moved from paying a monthly money-saving tariff for gas and electricity on to a more expensive standard variable rate. It can then suggest to the customer that they could save money by finding a new supplier. The bank also uses

geo-location data from customers’ phones, so when they go abroad it can offer them a competitive currency exchange rate. One of the new breed of mobile-only banks, such as Atom Bank and Starling Bank, Monzo offers heightened levels of personalisation to customers. Atom Bank allows customers to customise their app with their own logo, and they can choose the colour scheme for their home page and invent a name for their bank, for instance “Jenny Bank”. Monzo offers a top-up debit card and has attracted 250,000 customers, with 150,000 using its services every week. In the next few months, it will launch its first current account where people can pay their salaries and run all their banking services. Mr Blomfield explains his vision for the future. “We see ourselves as custodians of not just your money, but of your data and making that data work for you,” he says. “We want to be a financial control centre that is totally personalised to you and which helps you live your life.”

Personalisation has been a long-held dream of banks and financial brands. They have access to huge amounts of data about their customers and believe they can analyse this to predict when is the best time to offer loans, mortgages, insurance policies and other products to customers. First Direct bank launched in 1989 with a strongly personalised approach. That meant not only using data to predict what products customers would need, but answering customer calls with a human assistant, rather than an automated call handler. These days technology has developed to such an extent that banks feel they can offer customised services through analysis of data and transactions. But some wonder whether financial services brands have really cracked personalisation. “At the moment, we are still in a period where a lot of personalisation seems pointless, gimmicky or in some cases just plain wrong. There are firms that are so keen to personalise that they are using inadequate data and just getting it wrong,” says financial consultant Lucian Camp. An often-cited example of the way financial brands can bring new levels of personalisation is the use of geo-positioning data from mobile phones to judge when a customer is visiting a car showroom. A financial brand could then send them an offer of a car loan at a competitive rate. Mr Camp says this seems a smart use of personalisation as the loan could offer a better rate than the car dealer’s. But he warns that such a personalised loan offer would look inappropriate if the customer had simply dropped into the showroom to book a service for the car. Monzo’s Mr Blomfield believes that established banks are taking the wrong approach to personalisation. “The problem that I see with traditional banks and when they speak about personalisation is that it is always a way of selling more financial products. They never seem to think how can we use this to really help our customers?” he says.



“Financial brands sense that with the advent of big data analysis, the personalisation moment has arrived

Even so, traditional financial services brands could find that data personalisation based on analysis of data transforms their relationships with customers. Abhijit Deb, head of banking and financial services in the UK and Ireland at technology company Cognizant, says personalisation will allow financial services brands to become more like lifestyle brands. “The last few years have seen banks, card issuers and lenders push the boundaries of personalisation to try to ‘understand and own’ their customer interactions,” he says. This is part of a strategy to promote customer loyalty and boost cross-selling and up-selling, where companies try to sell customers more expensive products. But he adds: “Financial services providers realise that they need to go beyond simple transactional relationships and move into lifestyle-based banking, where they are at the centre of any financial decision their customers make.” Bank brands could build greater loyalty with their customers through ramping up

their personalisation strategies. In one study of affluent bank customers, 56 per cent of respondents said they would feel greater loyalty towards brands that know who they are and treat them differently to other customers. The research by Collinson Group shows that nearly three in five expected their bank to offer products and services that met their needs. And more than two thirds of customers expected their bank to reward them for staying loyal. “By offering more personalised rewards and cross-selling relevant products, financial services organisations boost revenues while ensuring their customers feel recognised and valued, keeping them loyal in the long run,” says Christopher Evans, director of Collinson Group. Financial brands sense that with the advent of big data analysis, the personalisation moment has arrived. Personalisation should mean that bank customers receive fewer unwelcome communications and more offers that are relevant to their needs. Mr Camp says the move from mass-marketing of financial services to an era of personalised marketing should benefit customers. But he adds that this transformation is more challenging than had been expected. “It is just taking a bit longer; the challenges of making the transition are just a bit harder, more expensive and more complicated than we thought they were going to be,” he says. Customers may have to wait a bit longer for financial services which are truly personalised. ●

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TOP TIPS

Five top lessons banks can learn from other innovative industries

Traditional banking is being shaken up by online disruptors, but there are also lessons to be learnt from successes in other sectors

FINBARR TOESLAND



PREDICTIVE ANALYTICS: UTILITIES

1 The utilities industry has long struggled to minimise leakage from water networks, with conventional methods failing to fix the problem. But IT consultancy Capgemini worked with their utility clients to help limit water loss through the effective use of predictive analytics. “The application of advanced analytics combined with extensive integration of multiple data sources has enabled us to identify leaks up to three weeks before they would normally be identified,” says Colin Payne, principal at Capgemini Consulting. “The application of data solutions here is a classic example of a step change that turns a traditional reactive business model into a predictive one.” Financial institutions can leverage their customer data, including payment history, phone transcripts and even social media accounts, to capitalise on the offer of predictive analytics to assist in the detection of fraud. Predictive analytics tools can be applied to virtually any part of a bank’s operations to discover consumer behaviour, showing the potential for data solutions to go far beyond just improving operations. Established business models in the banking industry are on course to be shaken up as every click, purchase, like and search a consumer makes is used to create a unique digital identity, which can then be fed into predictive analytics solutions.

BRANCH BANKING: LOGISTICS

2 Online banking has made access to banking services easier than ever for millions of people and in the process reduced the need for an extensive branch network. Consumer group Which? says more than 1,000 branches were shuttered between January 2015 and January 2017, with further closures expected this year. However, many customers still want to use their local bank branch for face-to-face services, leading to difficult conversations around which branches to close. The effective use of data can make it simpler to decide which location is the best to provide these services. “Businesses such as parcel collection firm Doddle have used data intelligently to both provide a service and at the same time shrink the footfall needed, so they can operate out of a simple kiosk in a supermarket or station, without needing to tear up the area to incorporate it,” says Rowan Scranage, vice president and general manager, Europe, Middle East, Africa and Asia-Pacific, at database provider Couchbase. These data solutions will become increasingly important as new physical banking initiatives, such as drive-through banks, are trialled in the UK over the next few years.



ARTIFICIAL INTELLIGENCE: MANUFACTURING



4 The use of artificial intelligence (AI) in banking is not a new phenomenon, but rapidly developing AI technologies are expected to become commonplace in banking over the next few years. “Early applications for AI have spread through many industries, from healthcare where providers are starting to use cognitive analytics to aid in the diagnosis of patients, to consumer products such as Apple’s Siri, with varying degrees of success,” says Dr Richard Harmon, director of Europe, Middle East and Africa financial services at Cloudera. “This is viewed as one of the key areas where big data analytics will accelerate continued innovation and development.” Retail companies have been at the forefront of using AI-enabled chatbots and virtual agents, with banks yet fully to embrace these solutions. As speech recognition and decision-making technologies improve, financial institutions will be more comfortable investing in data-backed solutions such as robo-advisers that offer automated financial planning services. If the technology continues to grow at its current rate then it would not be outlandish to expect to see experimental physical robots in-store at banks, insurance firms and other institutions within the next five years, especially as technologies around visual perception and language translation are perfected.

RELATIONSHIP BUILDING: INTERNET OF THINGS (IoT)

3 Establishing a comprehensive customer identity is vital for banks who want to offer the most relevant products and services. One of the key benefits of data is its ability to illuminate customer needs and requirements, but obtaining hyperspecific details on clients can be difficult. To improve understanding of exactly what consumers want, banks can follow the example of healthcare organisations such as BD which is using data to transform diabetes treatment. “IoT-enabled EpiPens combine with phone apps to not only record exactly when insulin is administered, but share that information with the patient’s doctor. Patients can also take photos of meals, which are then available for their doctor to view, giving much more insight into patients’ lifestyles and potential risks,” says Rowan Scranage at Couchbase. If banks were to duplicate this method for mortgage, loan and insurance products they could present more accurate advice and a personalised service. The Financial Conduct Authority’s *Mortgage Market Review* means lenders are carrying out more detailed affordability checks and expecting applicants to divulge more personal financial information than ever, which can often be seen as intrusive. However, if banks were able to collect this data seamlessly from the customers’ IoT-enabled devices and in the process gain insights into their lifestyle, more appropriate products could be offered.



USER EXPERIENCE: TECHNOLOGY COMPANIES

5 Major retail banks now all have mobile and internet banking apps, but these services are often cumbersome to access and provide little beside a basic account summary. With the rise of digital-only challenger banks, such as Atom Bank, traditional financial institutions have to make better use of the data they possess to offer a better user experience. “Companies like Amazon, Uber and Netflix have won customers from competitors by prioritising the end-user. They have used customer data to offer a more personalised, seamless and connected experience. Banks must contend with the fact that consumers have raised the bar on speed, ease of use and consistent service in a digitised world. Just like other industries, bank customers expect personalised, targeted and contextually relevant interactions anywhere and anytime,” says Richard Harmon at Cloudera. By making it easier to access banking on the go and present pertinent products to users on mobile, based on extensive customer data, conventional banks can utilise the most user-friendly elements of startup banks. “Big data has made this possible as well as breaking the departmental silos and adding new types of data sources. Use-cases include next best offer, lifetime customer value, churn analysis, sentiment analysis, enhanced actuarial models and others,” adds Dr Harmon.



‘Don’t tell my dad I’m pregnant, but do tell my boyfriend he needs to buy a Bugaboo’

CHRIS SKINNER
Chairman
Financial Services Club



There’s a story everyone probably knows by now, but it illustrates the challenge of using data to personalise services. The story is of Target, the US retailer, that analysed buying habits of customers and found pregnant woman purchased more unscented lotion and supplements, like calcium, magnesium and zinc, in their second trimester. So they targeted them with coupons and offers for baby clothes and accessories. The story goes that an angry man went into a Target store demanding to talk to the manager. “My daughter got this in the mail!” he shouted at the manager. “She’s still in high school, and you’re sending her coupons for baby clothes and cribs. Are you trying to encourage her to get pregnant?” The manager didn’t have any idea what the man was talking about. He looked at the mail. Sure enough, it was addressed to the man’s daughter and contained advertisements for maternity clothing, nursery furniture and pictures of smiling infants. The manager apologised and then called a few days later to see how things were. On the phone, though, the father was the one apologising. “I had a talk with my daughter,” he said. “It turns out there’s been some activities in my house I haven’t been completely aware of. She’s due in August. I owe you an apology.” This story lays the basis of what banks and any other companies should consider when they are using their customers’ data. Firstly, they need permission to use that data. Secondly, they need to know what is sensitive, what is private and what can be shared and used. Thirdly, and most important of all, they need to be intelligent with the data. The first opportunity is easy, but is going to get slightly more difficult with the European Union General Data Protection Regulation (GDPR). Under GDPR you have to show how you are using customers’ data and show clear compliance with permissions or fall foul of the law. This is where the second part becomes interesting. Sharing my name and address with a third party may not be a problem as they could get that from an electoral register, but sharing my income is personal. Did you check you had permission on that one? And the third is the toughest part because banks aren’t particularly good with customer data. Much of the data about customers in a bank is in lines of business that separate and fragment that knowledge of the customer. Equally, much of the processing in a bank is through a variety of different systems. Your credit card payment can pass through one system, while your standing order through another and direct debit through a third. In fact, most banks have dozens of different computers processing everything in a specialised way with little integration or holistic view of who you are as a customer. This is the biggest challenge as there are many new players coming into the world of finance that are intelligent with data. Think Facebook, Apple and Amazon. Under new EU regulations they now have the right to demand access to your bank data and, if you give them permission, the bank must share that data with them. So what do you think Facebook will do when it can easily connect you to all your friends to send money or when Amazon can allow you to not only see your orders, but the banking flows that go around those orders? This is one of the banks’ biggest fears, namely that the internet giants will use customer data really intelligently to give you better service and better understanding of how you paid for what, when and to whom. But isn’t that the real customer need here? To be intelligent with my data if I give you permission to use and store it? Don’t tell my dad I’m pregnant, but do tell my boyfriend he needs to buy a Bugaboo.

DIGITAL TRANSFORMATION IN FINANCIAL SERVICES AND INSURANCE

SENIOR INDUSTRY MARKETING EXECUTIVES LISTED THE SINGLE MOST EXCITING OPPORTUNITY IN 2017

