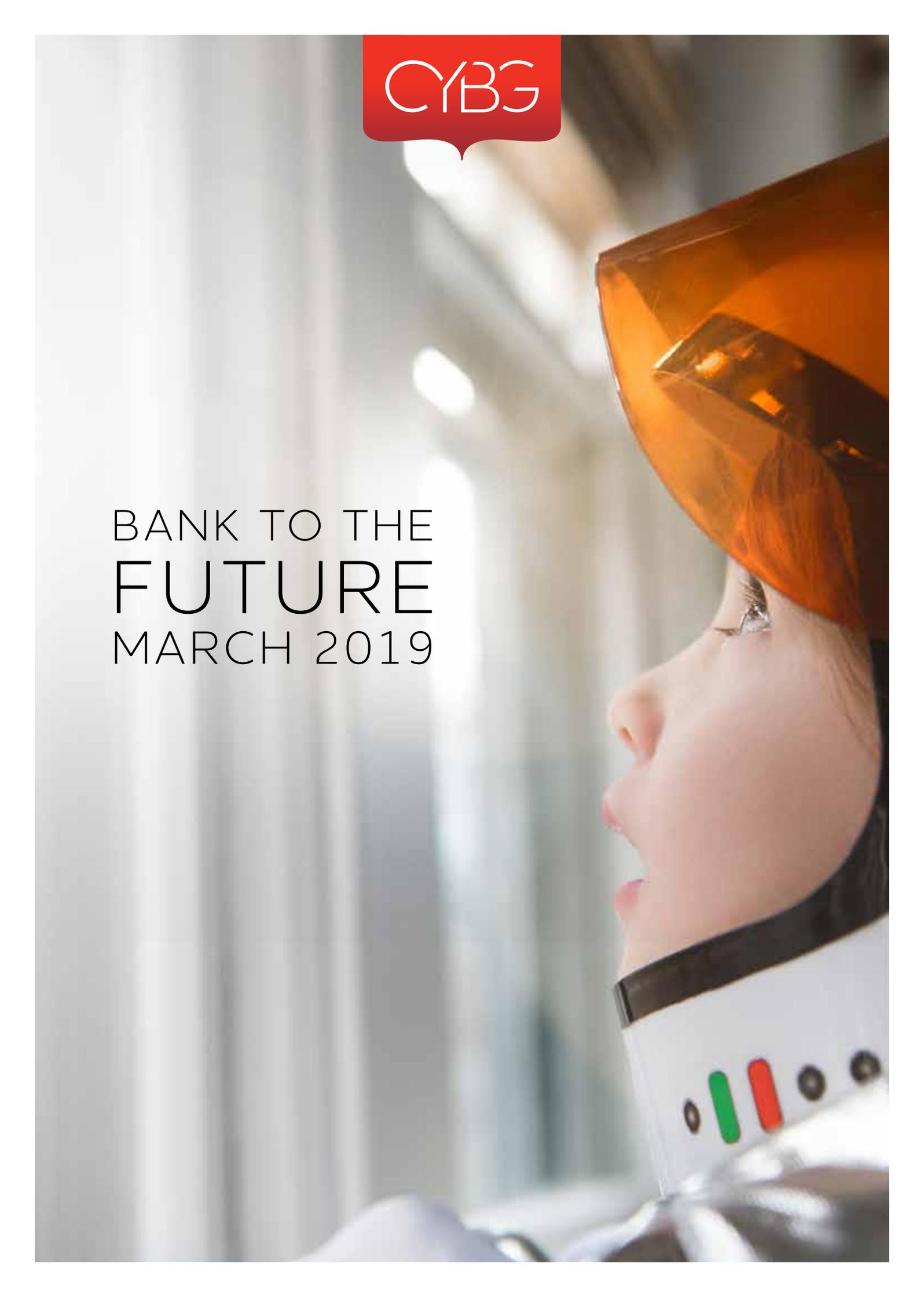


The logo for CYBG, consisting of the letters 'CYBG' in a white, sans-serif font, set against a red, rounded rectangular background that has a small notch at the bottom center.

CYBG

A close-up, profile view of a young child wearing futuristic orange-tinted goggles and a white and black collar with colorful buttons. The child is looking upwards and to the right. The background is a blurred, brightly lit interior with vertical lines, possibly a modern building or a futuristic setting.

BANK TO THE
FUTURE
MARCH 2019

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About this report

This report synthesises the findings of an extensive research programme undertaken by Foresight Factory and was commissioned by CYBG PLC ("CYBG"). The views and opinions in this report are those of Foresight Factory and other contributors (the "Contributors") and do not necessarily reflect the views, opinions, financial position, business strategy or intentions of CYBG, its group companies, or its directors or employees.

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About Foresight Factory

Foresight Factory is a leading international consumer futures business. Our core expertise is based on identifying and forecasting social and consumer trends and determining the extent of their impacts on markets, services, brands and products. Since our launch in 1996, we have worked to meet the strategic needs of businesses through the application of insight. We identify, measure and examine trends, attitudes and behaviours through the rigorous analysis of quantitative and qualitative research. Our robust programme of research provides businesses with the grounding and confidence to anticipate the likely impact of the evolving consumer environment and identify new market and revenue opportunities. For more information, visit

www.foresightfactory.co

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About CYBG

CYBG PLC is the UK's sixth biggest bank offering a true alternative to the status quo in banking. Operating under the Clydesdale Bank, Yorkshire Bank, B and Virgin Money brands, we are the only Bank outside the 'Big 5' that boasts a genuine full-service retail and SME capability. We serve over six million customers across the UK through an omni-channel model of online, mobile and telephone banking and we have a national network of 250 branches and business banking centres. Our ambition is to offer the best service in UK banking, providing customers with market-leading functionality and innovative products, supported by robust technology and a first class, personal customer experience. In February 2016, we completed our IPO from National Australia Bank, regaining our independence for the first time in almost 100 years. CYBG completed the acquisition of Virgin Money on 15 October 2018, enhancing the Bank's scale and national footprint.

FOREWORD

▲ At CYBG we strive to understand what the future would look like for our customers, for our operations, and for our employees. But we also wanted to gain insight into the shifting role of banking in society. Foresight Factory carried out this rigorous piece of analysis for us to give depth to our quest to analyse and ensure we are ready for what the future of banking will bring.

The clear message is that in many respects the bank of the future is already here. What some people may see as futuristic technology, and a radically changed form of banking, is now the norm for others.

Open banking, voice controls, biometric identification and Virtual Reality (VR) are all increasingly used so it's an exciting time for banks as we adopt new technology and determine how it can positively play a role in people's lives. But we need to remember that human nature doesn't always embrace change wholeheartedly. Our 18th Century forebears were slow to adopt the innovation of cheques. And 50 years ago when cash machines were invented they seemed as new-fangled and futuristic as robot advisors seem now. Everything changes and, to stay ahead of the game, we need to adapt technology to the everyday needs of our customers, but vitally we need to bring them with us.

Not everyone wants the open banking benefit of a dashboard showing all banking operations at a glance. The idea of using voice or thumbprint identification makes some consumers fearful about security. And VR, robot advisors and fridges re-ordering groceries (the internet of things) might as well belong on the set of Back to the Future, or indeed Bank to the Future.

But it is some of these doubters – including those on lower incomes, older generations and the self-employed – who arguably stand to benefit most from innovations such as tech-enhanced budgeting tools and predictive analytics.

The abiding digital divide deserves attention and we need to explore how we gently persuade people who are less inclined to use new technology to adopt new banking habits. We have already started our approach with our B bank where in the high-tech, new Manchester branch our customers can also interact with helpful staff and have a cup of coffee or even attend a yoga class.

This report allows us to think through potential consequences of technological change in banking. As an industry, we have an obligation to consider whether this change is appropriately regulated with collective action from industry, and from government, to protect consumers and to encourage wider uptake. It's also not just about the current framework, but we should reflect on whether we're putting the right preparation in place for the future. Regulation often struggles to keep pace with technology as we are currently seeing with clashes between governments across the world and global tech titans.

Collaboration will be key to our vision of future banking. As a bank, we don't have a monopoly on great ideas. We are already working with FinTechs to bring groundbreaking new services to our

THIS REPORT ALLOWS US TO THINK THROUGH POTENTIAL CONSEQUENCES OF TECHNOLOGICAL CHANGE IN BANKING. AS AN INDUSTRY, WE HAVE AN OBLIGATION TO CONSIDER WHETHER THIS CHANGE IS APPROPRIATELY REGULATED WITH COLLECTIVE ACTION FROM INDUSTRY, AND FROM GOVERNMENT, TO PROTECT CONSUMERS AND TO ENCOURAGE WIDER UPTAKE.

customers and expect to do more of this in future. The UK is a world leader in the emerging FinTech industry and, as a company, we intend it to play a part in entrenching that strength.

I am convinced that technology is a great enabler, but we also need to ensure that we retain the human touch. And our research shows that over three-quarters of people – across the age spectrum – value the human touch in banking, and will still want to speak to a person, or visit a branch, no matter how advanced technology gets.

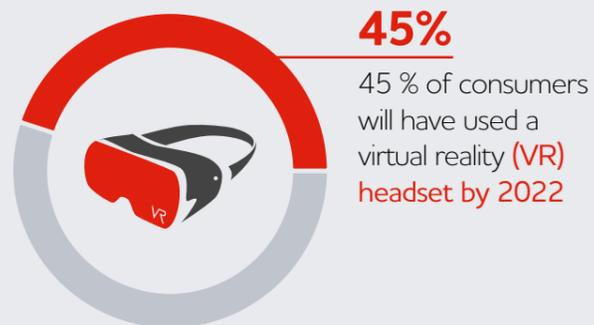
The report findings will help us to deploy technology to enhance our offering, driven by the warmth of our people and the depth of our heritage; we won't become a cold, impersonal, robot-driven bank under my watch! We need to intertwine the old-fashioned value of trust with new technology to improve the lives of all our customers.



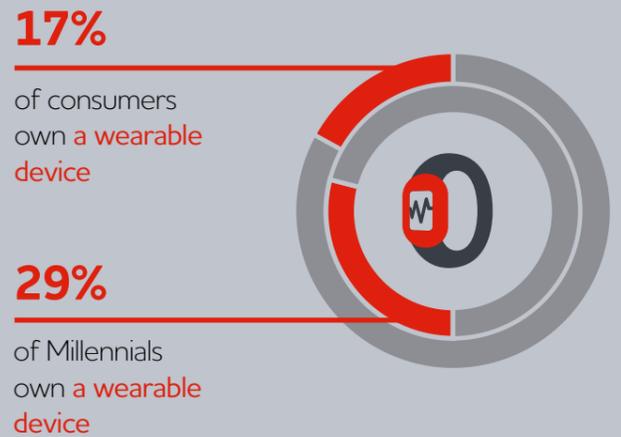
*Mark Curran,
Director of Payments and Open Banking, CYBG*

THE BANK OF THE FUTURE

HOW WILL WE BANK?



SOURCE: UK FINANCE



“ Millennials are more likely to choose new tech, but face to face is still the most important method of communication ”

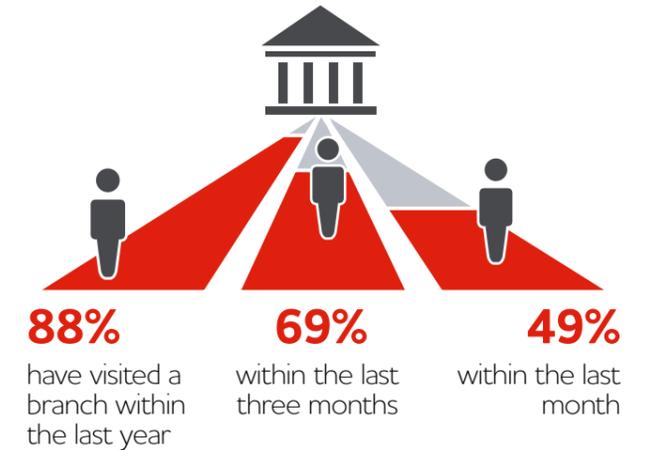
MAINTAINING THE HUMAN TOUCH

INDUSTRIES WHERE CONSUMERS 'DON'T WANT TO SEE ALL PROCESSES TURN DIGITAL'



SOURCE: Market research company Censuswide. Consumer research was carried out among 2000+ respondents from all demographics and regions of the UK from 8 to 11 March 2019

BANK BRANCHES ARE STILL IMPORTANT



“ Banks need to intertwine the old-fashioned value of trust with new technology to improve the lives of all customers. Banks can build this trust by tackling cyber crime issues and by enabling more secure authentication and improved identity verification. ”

EXECUTIVE SUMMARY

▲ We are on the verge of a radical transformation in financial services. Banking as we know it is set to undergo significant change, driven by rapid technological advances, new regulations and evolving consumer needs.

This thought leadership report evaluates the key trends driving the future shape of banking for consumers, as well as small and medium sized businesses over the coming decade and explores four distinct themes:

- 1. Money Management** – exploring how spending and saving, budgeting, investing and loan applications are likely to change in the future.
- 2. Customer Service** – anticipating how interactions between banks and customers will become more personalised and digitised.
- 3. Payment Methods** – highlighting how payment methods and transactions will be transformed.
- 4. Trust, Security and Verification** – considering issues of trust, security and verification in light of growing cybercrime worries and data breaches. These themes will be explored from a 'now' (up to three years), 'next' (three to five years) and 'future' (five to ten years) perspective – indicative of when widespread consumer adoption is likely to occur – in order to understand how banking infrastructure will change, and to consider future opportunities and challenges. Our research rendered a number of key findings, with a selection of compelling data figures listed below.

Budgeting tools will become more precise and sophisticated

Monitoring personal finances will become more precise as new apps and services enable customers to accurately track spending and saving. Although the aspiration to budget is equally high across demographics, usage and interest in an app that motivates users to stick to a personal goal such as saving is the most pronounced among younger consumers and those in higher income categories. Indeed, 74% of Millennials and 68% of consumers earning more than £75,000 per annum have used or are interested in using an app that motivates users to stick to a personal goal. These budgeting tools will become more sophisticated over time, offering account aggregation and predictive analytics functionalities.

Chat-based interfaces and voice-powered banking elevate brand-customer interactions

Over the medium term, we expect brand-customer interactions to become more informal, direct and convenient due to the increasing sophistication of chat-based interfaces and voice commands. Chat messenger services will start to incorporate voice-powered banking to elevate customer engagement. In 2018, 28% of consumers had used voice commands on their smartphone or tablet and this is forecast to grow to 42% by 2025.

Financial advice will be delivered through artificial intelligence and in virtual reality spaces

Robotic advisors, powered by artificial intelligence, will be able to carry out an increasingly wider array of banking activities and are set to become more human-like in their interactions with users. Furthermore, we anticipate that virtual reality will gradually be deployed in the banking industry to enable more direct interaction with customers and allow for an immersive overview of key financial

information. Currently, 35% of consumers own or are interested in owning a virtual reality headset, rising to 60% among 25-34 year olds. By 2022, we expect that 45% of consumers will have used a virtual reality headset.

Wearable devices will characterise the future of payment methods

We will witness a gradual evolution in payment methods from contactless cards to wearable devices. The adoption of wearables is part of a wider narrative where digital devices will be more seamlessly connected and less intrusive. When it comes to payments, wearable devices enable easier and more convenient transactions – and their popularity is evident; 17% of consumers in total own a wearable device, rising to 29% among Millennials and 39% among those earning more than £75,000 per annum.

Mass adoption of biometrics will transform payment systems and authentication processes

The usage of wearable devices will soon be complemented and ultimately be replaced by biometric payment methods. Biometric identification technology will greatly enhance security for consumers when carrying out banking activities and will be beneficial in preventing fraud. 20% of consumers have already used their fingerprint as a form of I.D. to make purchases, with a further 28% interested in doing so. Behavioural biometrics, which more accurately verify a user's identity, are also anticipated to be increasingly deployed for authentication purposes.

Banks will need to build trust by safeguarding personal data and addressing cybercrime worries

The financial services industry has been experiencing a trust deficit ever since the financial crisis a decade ago. Going forward we anticipate that consumers will place higher importance on banks managing their money responsibly, but also safeguarding their personal data. Our research indicates that 74% of respondents would like more control over the personal information they give to companies and the way in which it is stored – a sentiment which is felt equally high across demographics. Given that the majority of consumers believe that the risk of falling victim to cybercrime is increasing, financial institutions should take these issues more seriously and aim to become trusted partners for consumers.

INTRODUCTION

UK MAINTAINS THE TOP POSITION OF TOTAL FINTECH INVESTMENT IN EUROPE IN 2018

▲ The banking industry is currently experiencing one of the biggest transformations in financial history. Emerging technologies such as artificial intelligence, biometrics, big data analytics and virtual reality promise to change society in ways that we cannot yet fully imagine.

Traditional banking institutions and FinTech players alike are already capitalising on the applications of these new technological innovations, which will disrupt how banking services are delivered to customers and are set to radically change our financial lives.

FinTech market activity has burgeoned on a global scale, with investments across venture capital, private equity, and mergers and acquisitions deals gathering momentum. The United Kingdom has historically been one of the global FinTech leaders – along with the United States, China and India – and continues to attract significant investment. Within Europe, the UK maintains the top position and accounted for more than half of the region's venture capital deals in 2018, with total European FinTech investment reaching \$34.2 billion across 536 deals.¹

Growth in this space is expected to be catalysed by the UK Government's FinTech Sector Strategy released in March 2018, as well as funding initiatives such as the Capability and Innovation Fund administered by the BCR² and Nesta's Open Up Challenge. These initiatives are designed to encourage the development and improvement of financial products that are specifically geared towards the banking needs of small and medium sized enterprises (SMEs) – defined as any business with fewer than 250 employees. Undoubtedly, SMEs

form an essential part of the UK economy and pose a lucrative segment for banking institutions. There were 5.7 million SMEs in the UK in December 2018, which represented over 99% of all corporations, and accounted for 60% of total employment³. Naturally, the banking needs and expectations of SMEs are different from those of individual consumers and large businesses.

Against this dynamic backdrop, Foresight Factory was commissioned by CYBG to explore the future of banking in the UK for both individual consumers and SMEs. Clearly, this an extremely broad topic and we have therefore identified four key macro themes we believe will significantly impact the banking industry. These are Money Management, Customer Service, Payment Methods and Trust, Security and Verification.

For each macro theme, we have considered the 'now' – current situation; 'next' – likely events over the medium term (three to five years); and 'future' – potential developments over the longer term (five to ten years). We have also considered the top-line implications for individual consumers and SMEs, which we hope provides insight into growth opportunities for banks going forward when it comes to initiating strategic acquisitions and establishing brand partnerships.

¹ Source: Pulse of Fintech 2018, Global analysis of investment in FinTech, KPMG International (data provided by PitchBook), 4 January 2019

² The Capability and Innovation Fund is administered by the independent Banking Competition Remedies Ltd. (BCR) and comprises £425 million to encourage the development and improvement of financial products for SMEs.

³ Source: House of Commons, Briefing Paper, 12 December 2018

BACKGROUND

▲ The future of the banking industry in the United Kingdom will be driven by three primary contextual drivers: trust in banking institutions, regulatory changes and technological disruption.

Trust in banking institutions

Ever since the global financial crisis a decade ago, consumers have shown a lack of trust in the banking sector. While the financial services industry has regained trust among the public over the past six years according to the 2019 Edelman Global Trust Barometer, it still ranks as the lowest-trusted sector compared to all other industries surveyed including automotive, energy, telecommunications, retail and technology.⁴

This trust deficit has opened up the banking industry to more competition from new FinTech brands. John Makin-Shaw, former Senior Manager of Customer Strategy at HSBC and former Head of Innovation at Direct Line Group, notes that “the banking startups have trust on their side, because their reputation hasn’t been tarnished by the financial crisis.” While this does present an advantage for new FinTech brands, longevity can work in the favour of an incumbent bank as long as they have maintained a customer-centric approach. Particularly local and regional banks that emphasise human interaction in their customer service approach will be able to harness this trust element.

Despite a lack of trust in the financial services sector overall, most consumers tend not to switch their current account to another bank. This may be attributed to the fact that people do not see compelling enough reasons to entirely switch to another bank, i.e. the points of differentiation are not sufficiently large between banks. Additionally, consumers still trust their bank to handle their money correctly and responsibly. Richard Johnson, former Head of Internet and Telephony at RBS and

former Head of Strategy at Natwest Retail, posits that “while brand perception of financial institutions might not be too good, people still fundamentally trust them to look after their money.”

Regulatory changes

Recent regulatory changes are also expected to have a major impact on the financial services landscape and FinTech innovation. While the European Union’s General Data Protection Regulation (GDPR) received the bulk of the press coverage in 2018, the EU’s Second Payment Services Directive (PSD2) and Open Banking in the United Kingdom are much more influential to the future shape of banking. These new regulations are designed to encourage innovation and competition in the financial sector, with Open Banking requiring the nine largest banks in the UK to allow access and share a customer’s financial information with other providers via a standard API, as long as the account holder has given explicit approval. These regulatory changes are designed to create a more level playing field where new financial brands can compete with incumbent institutions more easily.

According to Mark Curran, Director of Payments and Open Banking at CYBG, Open Banking provides opportunities for all players in the financial services industry. The problem predominantly lies with the high number of new entrants that have appeared on the marketplace, which cannot all survive. He believes that there is scope for incumbent financial institutions to successfully collaborate with FinTechs and big technology companies alike – as long as banks clearly define their strategy early on and are aware of the unique strengths they bring to these partnerships.

Although Open Banking is a much-discussed topic among insiders in the financial services industry, the vast majority of the general public is unaware of its existence and unfamiliar with the provisions of the new regulation. Indeed, according to research conducted in February 2018 by YouGov on behalf of CYBG, 58% of British adults did not know what Open Banking was⁵. When it was explained to survey participants what the provisions of the new regulation could mean for their financial

management, it turned out that nervousness about sharing financial data and worries about security posed a notable barrier to potential adoption and engagement.

However, there is some segmental variation here; while older consumers might be wary about using new digital tools and services, younger demographics are more likely to see the benefits of Open Banking and be more enthusiastic about new ancillary financial products such as smart budgeting and account aggregation. Novel FinTech applications facilitated by these regulations will especially appeal to SMEs, as opening up their accounts could save them time and money in their financial management processes.

Technological disruption

Technological innovation appears to be the most pervasive factor influencing the future shape of banking. The impact of the Fourth Industrial Revolution will resonate across industries and sectors – with the scale and speed of change of technological developments continuing unrelentingly over the coming decades. The World Economic Forum describes the Fourth Industrial Revolution as a shift from simple digitisation, electronics and information technology in the 1950s and 1960s (the Third Industrial Revolution) towards innovation based on new ways in which technology becomes embedded within societies and even human bodies⁶.

When it comes to the financial services industry, we have already seen a shift towards digital and mobile banking over the past few years, but technological applications and FinTech propositions seem to be accelerating. Due to increasing pressure from challenger brands and rising consumer expectations of speed and convenience, incumbent financial institutions are forced to keep pace with the latest innovations to ensure their competitiveness in a fast-moving industry.

Emerging tools and services such as robotic advisors, artificial intelligence and virtual reality are some of the most notable technologies set to transform banking as we know it. Particularly younger consumers and SMEs will be enticed by these new

FinTech applications as they hold the promise of a more convenient, personalised and intuitive way to engage in banking activities. The full breadth of current and possible future applications will be evaluated in the following sections.



⁴ Source: Edelman Global Trust Barometer, 2019

⁵ Source: CYBG / YouGov Research | Base: 4,458 GB adults aged 18+, February 2018

⁶ Source: World Economic Forum, “What is the fourth industrial revolution?” January 2016

THEME I – MONEY MANAGEMENT

Money management is set to become more personalised, automated and aggregated. The way in which consumers and businesses will be able to track spending and saving, budget their finances, invest money and apply for loans is likely to look very different in the future.

NOW: Professionalised budgeting

The recession the late 2000s promoted a heightened commitment to precise household budgeting and intense scrutiny of personal expenditure among consumers. Throughout the 2010s, an austere (though improving) economic climate and low wage growth have kept these consumer motivations to budget high. Careful

budgeting has in fact become a highly-prized skill and, as this behaviour remains, apps and services have evolved significantly as well. Indeed, a wealth of online tools and apps have emerged which allow consumers to track the minutiae of their incomings and outgoings.

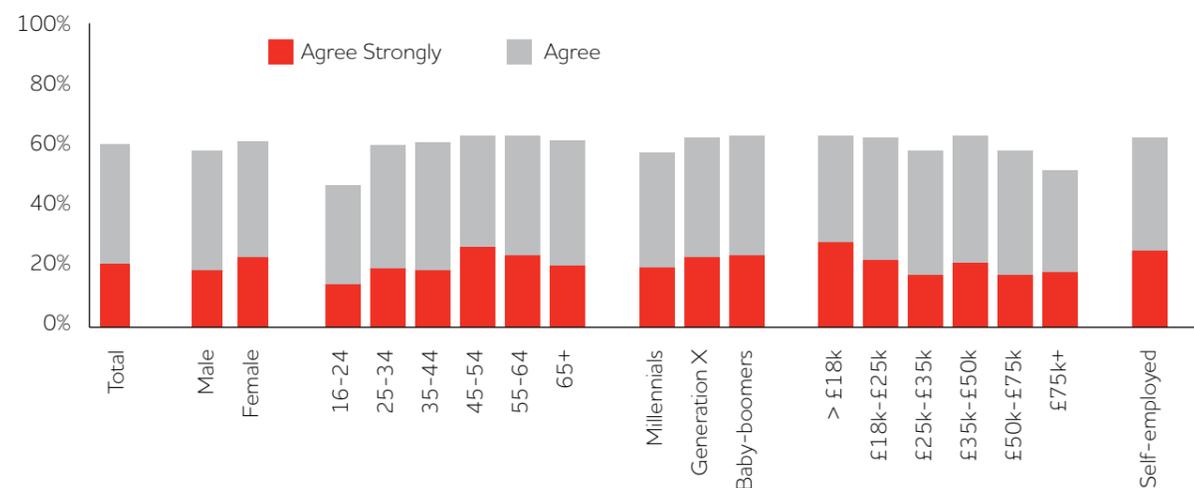
Some of the specific tools which have been introduced to assist customers in managing their finances include gamification and micro-saving. Gamification has been used to encourage better habits such as investing, saving or shifting spending behaviour. For those who find banking opaque and complex, gamifying apps and services can more easily nudge financial behaviour in a desired direction. Micro-saving redirects digital spare change into investments or savings accounts. By rounding up every purchase to the nearest whole number, users can accumulate significant savings over time.

*In April 2018, micro-investing app **Acorns** launched **Acorns Later**, aiming to provide a simple method of saving for retirement. Users can set recurring contributions either monthly*

“How strongly do you agree or disagree with the following statements?”

I carefully budget my finances each month | % who agree strongly or agree | 2018

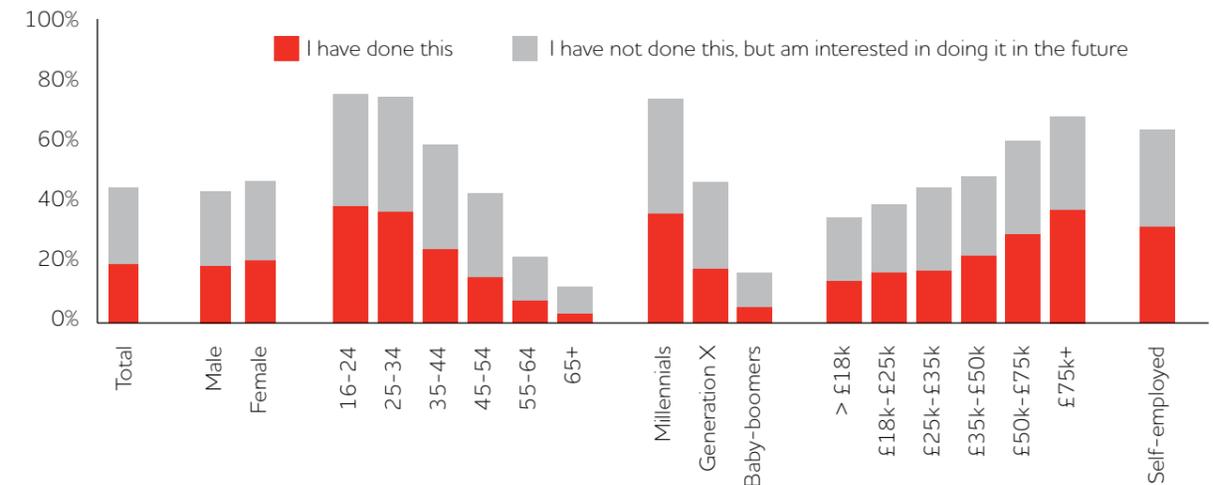
Source: Foresight Factory Research | Base: 4,217 online respondents aged 16+, GB, 2018 July



“Which of these things have you done already and which are you interested in doing in the future?”

Used an app that motivates me to stick to a personal goal | 2018

Source: Foresight Factory Research | Base: 4,217 online respondents aged 16+, GB, 2018 July



or weekly, as well as make one-off transfers. The service aims to make saving for retirement easier and simpler, and to engage consumers who previously considered pension schemes to be too complicated.

Naturally, there are some segmental differences when it comes to interest in budgeting tools and apps. While the motivation to carefully budget one's finances is similar across demographics, usage and interest in an app that motivates users to stick to a personal goal, such as saving is much higher among younger consumers, as well as higher income categories. Indeed, 74% of Millennials and 68% of consumers earning more than £75,000 per annum have used or are interested in using such an app. Interestingly, consumers who could arguably benefit the most from budgeting apps (i.e. those with lower incomes), are the least likely to use such financial products. These demographics might become more receptive towards using budgeting apps if their banks were to encourage micro-saving (i.e., saving small amounts of money) and concretely demonstrate how these savings could accumulate over time.

NEXT: Account aggregation and flexible lending

Over the medium term, we anticipate this professionalised mindset towards money management to become more sophisticated due to new account aggregation propositions. The implementation of the PSD2 regulation in the EU and Open Banking in the UK in 2018 will likely result in a wider range of financial institutions and applications providing users with these new

banking functionalities. By bringing a user's disparate accounts together, brands will be able to help customers to gain a more comprehensive overview of their financial situation. In turn, this can lead to a deeper understanding of personal finances, while automated services aid their management. While not all customers will proactively take advantage of this new power, the ability to outsource financial advice and support in a convenient manner will be a significant incentive.

*Launched in December 2017, and having received FCA regulatory approval in January 2018, **Emma** is an app that aggregates financial information and allows customers to view everything in one central place. From avoiding overdrafts to saving money on subscriptions, Emma offers advice on how to save money and take control of personal finances.*

The evolving mindset towards money management is underpinned by the perennial consumer desire for convenience and control. However, the need for control over one's personal finances can work in two seemingly opposing ways. On the one hand, consumers will welcome the increased ease with which digital banking services can be carried out as a result of evolving functionalities. On the other hand though, some will worry about sharing their financial data with third parties and might perceive these new applications as too intrusive. According to Jasmine Birtles, renowned financial journalist and Founder of the Money Magpie website, it will take a while before the majority of consumers – particularly older generations – will be completely comfortable

with the provisions of Open Banking. She points out that for older consumers, “the idea of somebody nosing around in your account would not be liked very much.”

While consumer perceptions on this issue will be divided by generational lines, small and medium sized businesses are likely to be quite optimistic about the benefits of account aggregation and the promise of increased convenience over their finances. Peter Simpson, Co-Founder of First Direct and Co-Founder of Ffreess Family Finance, suggests that “there is more opportunity for banks to provide the services which small businesses want. The small business wants to get on with its business, not deal with the finances – they want it to be as simple, straightforward and quick as possible.” John Makin-Shaw even believes that SMEs may start to build their own ecosystem with modular services, each of which would fulfil a specific purpose like invoicing, paying staff and overall money management.

Another area we expect to undergo a significant transformation over the medium term is the lending space. Currently, one’s eligibility for a loan is determined in large part by their credit score. These scores, however, have been notoriously opaque and difficult to access, and they have been controlled by a few large companies. Now, new startups are emerging to help demystify credit scores by providing free access to credit scores and reports, clarifying how credit scores are calculated and giving advice on how to improve them. Moreover, some brands are developing alternative ways of estimating a person’s financial reliability by measuring non-traditional metrics such as profession, lifestyle habits, utility bills and social media data.

Completing its Series A funding round in January 2018, **Petal** is a credit card startup that doesn’t require prospective customers to have a traditional credit score. Petal aims to make credit more accessible and simple – they don’t charge fees and quote interest in terms of how much money it would cost you. No credit score is needed, as credit underwriting decisions are made using machine learning based on customers’ earnings and bill payments.

FUTURE: Predictive analytics and robotic process automation

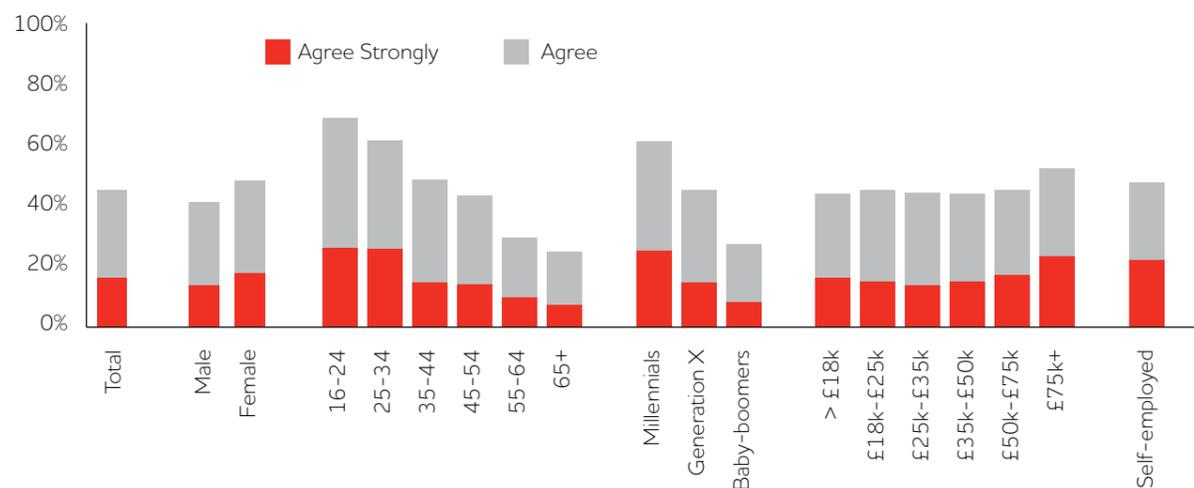
The next step in the analysis of personal finances will be the development of services and apps that predict how someone’s current financial behaviour might affect their long-term economic prospects, powered by big data analytics. Beyond tracking spending and saving in real-time, some platforms are now experimenting with forecasting services, providing information on future account balances. The uptake of these services will coincide with many consumers occupying a more passive role in their money management and requiring less direct user input to be able to track spending across accounts. By providing information on the future situation of the user’s personal finances, these services can help customers avoid falling into debt, or prompt them to make the most of any savings opportunities.

An early example of an app employing predictive analytics is the personal finance forecasting platform **PocketSmith**. In December 2017, the company launched an auto-budget tool, which analyses transactions and creates a weekly or monthly budget based on average spending and earning. PocketSmith offers projected daily balances up to 30 years into the future, and answers “what-if” scenarios.

“How strongly do you agree or disagree with the following statements?”

If I needed to borrow money I would ask family first before asking a bank | 2018

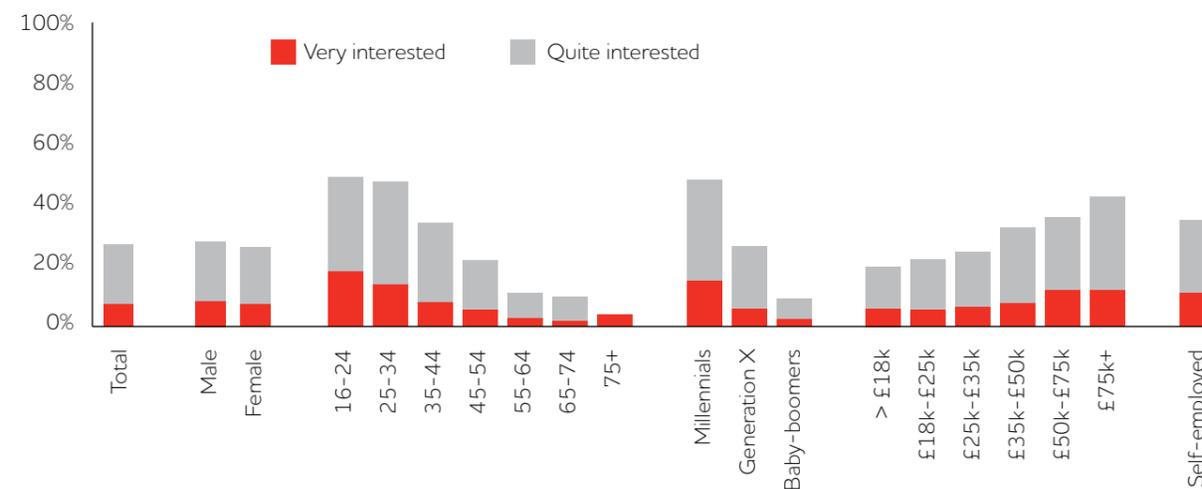
Source: Foresight Factory Research | Base: 3,954 online respondents aged 16+, GB, 2018 July



“How interested would you be in any of the following services?”

A service which linked your bank account / credit card and analysed your spending to help you budget better to meet your personal finance goals | 2017

Source: Foresight Factory Research | Base: 4,132 online respondents aged 16+, GB, 2017 August



Our research suggests that we are already seeing interest in a service which analyses spending to support with better budgeting and money management. Particularly younger demographics and higher income households appear to be interested in such a service. More than two in five self-employed customers indicate to be interested as well, over-indexing compared to around a third of total respondents.

Ultimately, we anticipate basic elements of money management to be taken care of automatically on behalf of customers through robotic process automation. Many consumers will welcome the opportunity to streamline and optimise some of their financial decisions, allowing intelligent AI assistants to make choices on their behalf. Currently price comparison sites already offer customers easy ways to compare and switch accounts. Going forward we expect consumers to start auto-approving switches – dependent on their preferences. Trust and security fears will remain a barrier for some, but many will be enticed by the offer of seamless switching and spending less time on service comparison. We could also imagine banking institutions assisting vulnerable customers through robotic process automation by taking away choice and control from them at critical moments. For instance, a bank could automatically decline a payment for certain spending categories such as gambling if that customer is known to be experiencing mental health issues or is struggling financially. Indeed, we are already seeing some banks that have started to incorporate these kinds of features such as Barclays, which became the first

high street bank in the UK in December 2018 to block payments from certain categories of retailers to protect vulnerable customers.

Bean is a free financial management app that automates the management of household finances. In March 2018, the app got FCA approval. Bean scans accounts to find and track all recurring payments. It then flags any potentially unwanted subscriptions and advises on service switching when a user could be saving money by comparing to other deals on the user’s behalf. If a user wants to cancel a subscription, Bean will take care of it by contacting the supplier to cancel the subscription.

THEME II – CUSTOMER SERVICE

Customer service propositions are expected to change notably over the coming years with personalisation sitting at the heart of delivering competitive customer experience and interaction.

NOW: Digital convenience and simplicity

While most core consumer needs such as cost, convenience and trust have remained stable, we have witnessed a growing customer demand for immediacy from brands. Over a third of consumers indicate to feel under time pressure in their everyday lives, rising to more than half among Millennials⁷. Nowadays digital tools and services allow consumers to optimise their time and we find that a growing proportion would be willing to spend money to save time. As a result, customer service propositions that provide users with immediacy and convenience are able to

demand a premium. When it comes to the financial sector, branchless banks and intuitive websites / apps that offer quick and easy recommendations will continue to succeed – particularly among younger demographics.

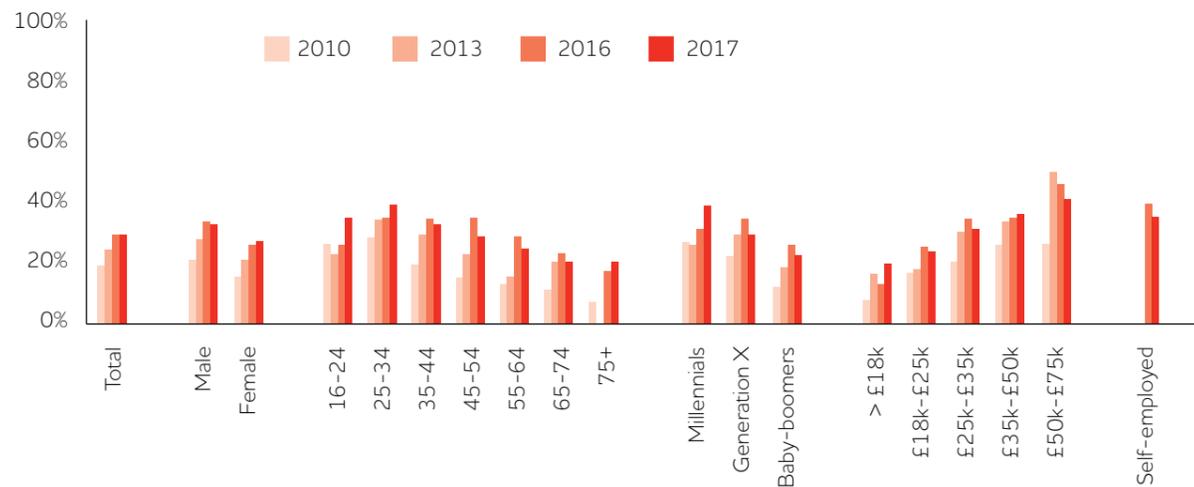
In May 2018, DBS Bank introduced its new brand positioning “Live more, Bank less” in Singapore, with the campaign reaching other Asian markets over the following months. The bank aims to deliver banking services that are simple, fast and invisible – freeing up the customer’s time so they can focus on the things they care about. Facilitating this is the launch of several new features, including DBS iWealth which is an easy all-in-one mobile app for users to handle their personal banking, view their portfolio, invest and trade globally, and receive curated insights into their investments.

Alongside the desire for ease and convenience, consumers also seek simplicity and intuitive design from banking apps. The world of finance has often been perceived as intimidating, particularly to young consumers, and we record serious appetite for

“Which of these things have you done already and which are you interested in doing in the future?”

Used voice commands on my smartphone / wearable / tablet e.g. Siri, Alexa, Cortana | Forecast

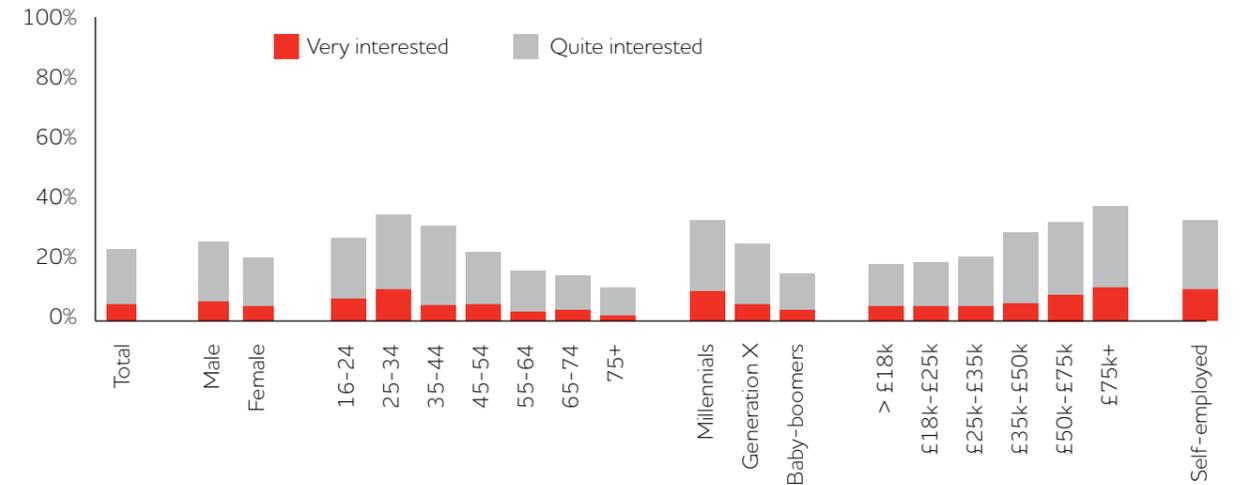
Source: Foresight Factory Research | Base: 4,216 online respondents aged 16+, GB, 2018 July



“How interested would you be in any of the following services?”

A bank that is only accessible online, i.e. does not have any physical branches

Source: Foresight Factory Research | Base: 4,054 online respondents aged 16+, GB, 2017 August



jargon-free banking. New and established brands alike are looking to simplify the systems and terms of the sector. A huge wave of new FinTech startups offer clean, minimal and down to earth design – often making them attractive to Millennial consumers who might be put off by the formal nature of high-street banks. However, we have also seen incumbent institutions creating new offerings to help better educate their customers and break down the confusing terminology of financial products into more simplified form.

Pearler is an online investment service that claims to make portfolio creation easy and personal. It allows consumers to choose investments based on their motivations and industries they believe in. The service likens itself to creating a music playlist because of the easy way that users can cherry-pick the types of things they want to put their money behind.

The societal trend towards convenience, simplicity and immediacy has also resulted in FinTech brands offering branchless banking and incumbent institutions transferring a wider array of services online. The 24-hour, on demand service proposition particularly appeals to a digitally-savvy Millennial audience, with banks able to offer their customers better rates on their services as a result of decreased operating costs.

Especially younger demographics, more affluent consumers and self-employed workers would be interested in a bank that is only accessible online. Receptiveness of branchless banking is clearly

segmented along customer groups and therefore requires a nuanced approach from banking institutions. Richard Johnson points out that “it’s very important that incumbents actually have a positive paradigm around being an incumbent and recognise what the deck of cards in their hands is – like branch networks, brand trust, expertise and staff – all those sorts of aspects can and should be leveraged.” Indeed, a physical presence still provides an element of reassurance to older consumers and while this attitude is slowly eroding, physical branches are expected to remain crucial for some time to come in appealing to certain demographics.

NEXT: Direct interaction and contextual awareness

Over the medium term, we anticipate customer interaction to become more direct and personalised due to the increasing sophistication of chat-based interfaces and voice commands. A second core development we expect to occur is the growing emphasis placed on banking institutions to provide financial products and services which are tailored to the individual. Here we might think of financial advice geared towards Millennials or banking services catered specifically to self-employed workers and SMEs.

Chat functionalities allow consumers and businesses to interact directly through instant messages and voice commands – in an informal way, as and when is convenient for the consumer. Chat-based tools have already been deployed by a number of financial institutions to answer simple enquiries and are becoming more intelligent over time. While

⁷ Source: Foresight Factory Research | Base: 4,141 online respondents aged 16+, GB, 2018 July

chat interaction with brands may not appeal to all users, providing consumers with the choice in how they interface with their financial provider is crucial. For younger consumers this may be particularly important, as they will often prefer texting and messaging with brands over verbal conversations. Not only do such options allow users to interact with brands in the manner most natural for them, speaking to a chatbot will also lower the engagement and energy required to ask questions and get information.

Currently 20% of British consumers indicate that they use a chat messenger service at least weekly to speak to a customer service assistant, rising to 38% among Millennials⁸. Over time we expect customer interaction to incorporate voice commands as well, although customers are more likely to choose this channel within the privacy of their own home, given the nature of voice based engagement.

In February 2018, OCBC Bank launched voice-powered banking, allowing customers in Singapore to carry out day-to-day banking activities using their voice. Using Siri, Apple's virtual assistant, retail banking customers can check account balances and make instant e-payments to other bank accounts in Singapore.

We expect 42% of consumers to have used voice commands on personal devices by 2025, rising to more than half among under-45s, consumers earning more than £50,000 per year and self-employed consumers. It is important to consider the types of banking enquiries consumers are likely to utilise chat-based interfaces and voice commands for. Over the next three to five years, we anticipate

these applications to provide more intelligent responses and to start offering at least basic financial advice and proposed next steps for more complex customer queries.

The second development that we believe will occur in the medium term is banking institutions harnessing an even more contextual understanding of their customers in order to provide personalised service and interaction tailored to the individual's demographic profile and circumstances. One interesting shift that we are witnessing is the growing importance placed on emotional intelligence and awareness, which is becoming a core commercial expectation. While functionality of banking services remains the top requirement for consumers, we find that brands are starting to take a more empathetic approach and are aiming to understand a customer's emotional wellbeing in order to be able to deliver warmer and more human interactions – whether this is via communication with a human assistant or a chatbot.

Beyond incorporating an understanding of a consumer's emotional wellbeing, customer service propositions are expected to become much more personalised and tailored to one's demographic profile.

Some banking institutions are specifically focusing on creating content hubs offering financial advice and planning to Millennial consumers to assist them with their money management skills. Powered by both established and emerging financial brands, these content hubs offer insights on anything from saving to advice on how to stay on top of debt.

30%
NOT SELF-EMPLOYED

42%
SELF-EMPLOYED

“How strongly do you agree or disagree with the following statements?”

I regularly switch between different financial products / providers to make sure I am getting the best rates | % who agree strongly or agree

Source: Foresight Factory Research | Base: 4,194 online respondents aged 16+, GB, 2017 August

Naturally, these kinds of platforms don't need to be confined to the Millennial generation and have the potential to provide other age groups or SMEs with financial education and advice. Engaging forms of content, which cover relevant topics, will help to build strong brand-customer relationships as consumers and businesses will feel their needs are being recognised in a down-to-earth way by banks.

Going one step further than financial education through online curated content hubs is interacting with customers in physical branches redesigned to provide a more experiential banking experience – allowing visitors to discuss their banking questions with store representatives. CYBG has pioneered in this area and opened B Works in Manchester in January 2019, providing a completely new banking environment with a financial lifestyle space – and we are seeing similar models appear elsewhere in the world as well. We anticipate that online customer service propositions will become increasingly convenient and personalised, but at the same time, we expect physical bank branches to begin to cater to the consumer desire for human interaction and financial guidance in a more experiential way.

In November 2017, DBS Bank launched a 'lifestyle space' aimed at the younger tech generation where digital banking is combined with human connection. The space includes a cafe brewing fresh coffee, a VR corner for retirement planning, Cash Services Machines and Video Teller Machines where customers can access "face-to-face" assistance via live videos. DBS also envisage using the space as a place where customers can

interact based on their interests. For example, there are plans to hold a monthly coffee appreciation class and a music competition.

When it comes to small and medium sized businesses in particular, there is a clear opportunity for banking institutions to support them as an all-round financial partner through offering time-saving and flexible services. Most financial innovation in this space is currently coming from FinTech companies, but we believe that established banks are able to provide similar offerings to self-employed workers and SMEs.

Strands is a FinTech software company that enables banks to provide a highly personalised money management service to their customers. Using Big Data analytics and machine learning, the software assists people and SMEs in better managing their financial lives and making more informed decisions.

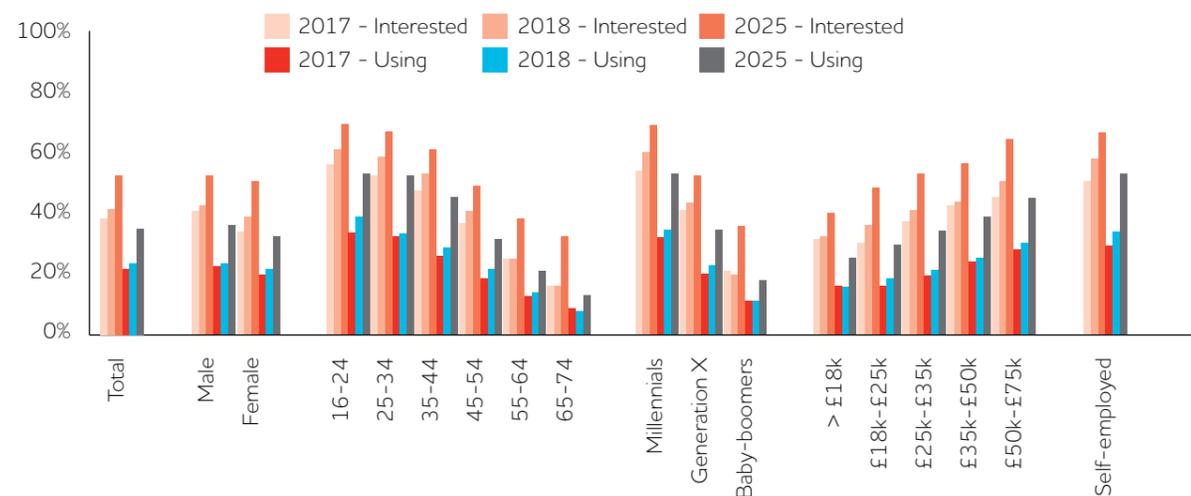
The importance of developing financial products and customer service propositions tailored specifically to entrepreneurs and SMEs cannot be emphasised enough. We have seen staggering growth in self-employment in the UK labour force over the past years. The ONS estimates that the number of self-employed workers has increased from 3.3 million in 2001 to 4.84 million in 2018, which at the time represented 14.8% of the total labour force⁹. Moreover, our research indicates that those who are self-employed tend to switch more regularly between different financial products and providers to ensure they are getting the best rates in comparison to consumers who are not self-employed.

⁸ Source: Foresight Factory Research | Base: 4,305 online respondents aged 16+, GB, 2017 August

“Which of these things have you done already and which are you interested in doing in the future?”

Used voice commands on my smartphone / wearable / tablet e.g. Siri, Alexa, Cortana | Forecast

Source: Foresight Factory Research | Base: 4,216 online respondents aged 16+, GB, 2018 July



⁹ Source: Office for National Statistics (ONS) - Labour Force Survey, February 2019

In contrast to the standard account holder, those who are self-employed appear to have more of a maximising mindset when it comes to switching between different financial products and providers, which might be explained by the fact that costs and convenience are especially salient for this customer group. While this does not necessarily entail that these groups are more likely to switch banks entirely, they might at least be more prone to consider alternative ancillary services that better fulfil their specific banking needs. One may think here of financial products and services such as insurance for gig economy workers, financial advice targeted at small businesses, easy digital invoicing systems and low-cost (international) bank transfers. Naturally, small and medium sized businesses will require a different approach in customer service propositions from banking institutions, but pose a lucrative opportunity if executed correctly.

Bunker offers insurance for workers in the gig economy with flexible, simple and quick policies to ensure compliance. Freelancers and small businesses seeking insurance to fulfil a contract can buy it on Bunker, who will also let the client know insurance has been purchased.

FUTURE: Robotic advisors and virtual reality

Automation in banking services is set to revolutionise how financial institutions and customers interact with one another in the future. We envisage intelligent algorithms and artificial intelligence to start helping people in managing their personal finances, without the need for human intervention. This will reduce operating costs for banks themselves and will also allow customers to receive a more tailored and

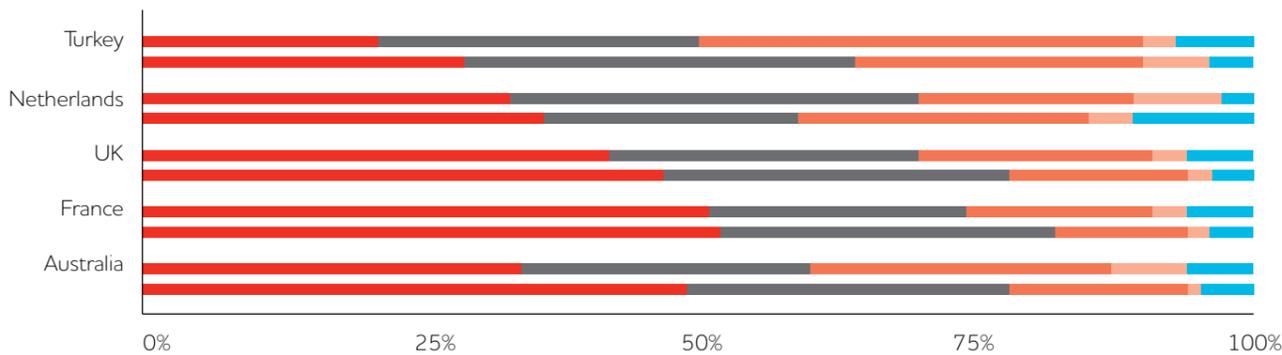
personalised service. It is likely to take some time before consumers are comfortable relinquishing complete control to automated systems and robotic advisors¹⁰, but some degree of guidance will be welcomed. As was alluded to earlier, there will be an adoption cycle when it comes to utilising intelligent digital systems for banking services – and certain customer groups will be quicker in their adoption than others. Initially, robotic advisors will only be able to assist with relatively simple queries, but in five to ten years from now we anticipate smart assistants to be able to conduct more sophisticated banking activities on behalf of the account holder. At the moment, there still exists a relatively high degree of discomfort with robotic advisors, with 42% of British consumers indicating not to want these kinds of systems to perform automated financial activities at all – only 3% of respondents in the UK would be happy for an algorithm to carry out financial decisions without their approval.

Before consumers become completely comfortable with allowing a robotic advisor to make financial decisions on their behalf and assist them with more complicated enquiries, a number of technological developments need to occur. First and foremost, artificial intelligence needs to become much more sophisticated in order for people to trust using these systems for their banking purposes. John Makin-Shaw notes that “with AI tools we are still very close to data fragmentation and it’s up to the end user to derive insights out of that. I feel that the interaction will become more useful when it’s gradually moved to providing people with actual insight from this information.”

“Would you allow a robotic advisor to make financial decisions for you?” | 2017

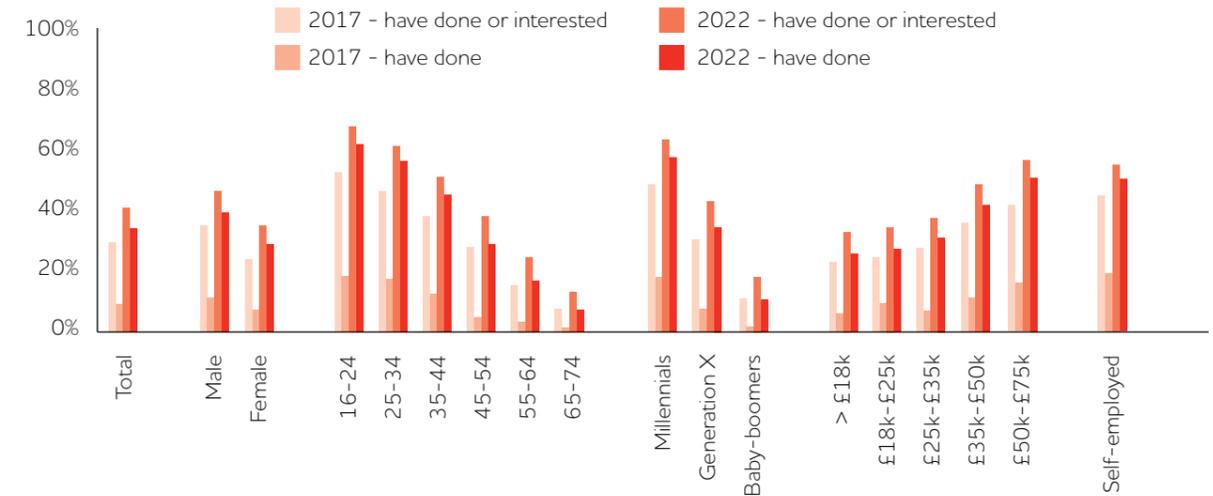
Source: ING/Foresight Factory Research | Base: 1,000 online respondents per country (500 for Luxembourg), 2017

- I don't want automated financial activities at all
- I'd like a computer program to give me advice but not make decisions
- If the decisions need final approval from me
- I would like a computer to conduct financial activities without approval
- I'm not really sure right now



“Which of these things have you done already and which are you interested in doing in the future?”

Used a VR (virtual reality) headset e.g. Oculus Rift, Samsung Gear | Forecast
Source: Foresight Factory Research | Base: 4, 305 online respondents aged 16+, GB, 2017 August



Second, smart assistants will need to become less mechanical and more human in their interactions with users. Systems that develop an understanding of the habits and behaviours of individual consumers, and improve over time through machine learning, are expected to become a reality in five to ten years from now. Robotic advisors might be able to understand someone’s emotional state in real-time through behavioural analytics and therefore come across as more empathetic. In order for automated digital interfaces to truly succeed in the future, they will need to incorporate emotional intelligence in customer service propositions. For example, consumers who appear anxious or confused in their interactions with a robotic advisor will want quite a different experience where the user is rushed and short on time – and these smart assistants will be expected to pick up on subtle emotional cues.

Amazon launched Alexa Speech Synthesis Mark-up Language in late April 2017 on its developers blog. The feature allows Alexa’s speech and expression to become more natural and human-like. For example, the AI assistant can whisper and bleep out swear words.

Third, the adoption of robotic financial advisors in the banking industry should not be seen in isolation. We are gradually moving towards a society characterised by pervasive computing where smart digital assistants will be ubiquitous and continuously monitor all areas of our lives. We envisage a future where one all-encompassing version of Alexa or Siri assists us whenever we need it and develops

a contextual understanding of our needs and behaviours. Thus, the uptake of robotic advisors is not driven by the financial services sector, but will be propelled primarily by wider adoption in society generally.

Over a longer term time horizon, virtual reality is also set to become more significant in customer service propositions within the banking industry. The recent emergence of new immersive technologies – from virtual reality headsets to holographic interfaces – collectively hint at what might lie ahead: a future where real-life experiences can be convincingly imitated in digital code; and where brands can magically transport us into specially-crafted spaces where the user is actively present in the faux moment. For the financial services industry, one might imagine a future where customers can interact with advisors in a virtual reality space and have an immersive overview of key financial information. For instance, one’s account balance or spending patterns might be visually dramatised through holographic technology, which would provide a much more realistic representation for customers.

With a rising number of virtual reality (VR) experiences being made available to consumers by media, retail and leisure providers, alongside some growth in VR device ownership, we expect that 45% of consumers will have used a virtual reality headset by 2022. Our research indicates that 10% of respondents already own a VR headset with a further 25% who would be interested in owning one.

¹⁰ Definition of robotic advisor: a computer programme that learns your preferences and invests money for you based on this information.

When it comes to customer service propositions in the banking industry, we expect virtual reality to become more important in five to ten years, although the exact applications remain uncertain due to a current paucity of use cases by financial institutions. We posit that, until there is a clear application that makes a real difference to consumers in the way they can carry out banking activities, adoption of virtual reality will take some time to get a foothold in this area. A few banks have already been experimenting with the new technology such as BNP Paribas, who are using virtual reality to assist consumers in home purchases.

*In May 2017, **BNP Paribas** revealed a VR app for retail consumers and a 'teleportation' capsule for home buyers. The new tools are designed to assist customers with their account management and decision making, and to streamline the customer experience. The app allows retail banking customers to view their transaction records, as well as to go through the steps of a property purchase. In partnership with **Vectual** and **RF Studio**, a physical capsule called the **POD** has been developed for prospective buyers to get a 3D, 360 degree view of homes that are under construction or for sale.*

However, overall we are optimistic about the potential of incorporating immersive technology in delivering future banking services. Peter Simpson concurs: "I am a massive believer in the unbelievable change VR will usher in to all aspects of our lives, not only in financial services. It's going to have incredible strategic implications and banking is going to be affected by that as well. It's not just around the corner, but it is definitely where [the financial services industry] is going."

"I am a massive believer in the unbelievable change VR will usher in into all aspects of our lives, not only in financial services. It's going to have incredible strategic implications and banking is going to be affected by that as well. It's not just around the corner, but it is definitely where [the financial services industry] is going."

Peter Simpson

THEME III – PAYMENT METHODS

Payment methods have evolved rapidly with an increasingly higher number of consumers going cashless and using digital payment devices such as NFC-equipped mobile phones and wearables. Here we explore how payments and transactions are likely to change over a medium and longer term time horizon – for both consumers and SMEs.

NOW: Cashless and contactless

Contactless cards, digital wallets and payment apps continue to transform the future of payment methods. Technological innovations have made cashless options more secure, convenient, traceable and ultimately more attractive to consumers. Contactless cards and mobile wallets have in many places already eliminated the need for cash altogether and have minimised the inconvenience which often comes with paying in cash. The percentage of consumers who have used a contactless payment debit or credit card has increased markedly in recent years.

According to recent figures from the payments technology company Worldpay, contactless transactions overtook chip and pin payments for the first time in the United Kingdom during the summer of 2018 ¹¹. Moreover, an annual payments survey conducted by the British Retail Consortium revealed that the volume of retail purchases made by card (cards in general, as opposed to cash) accounted for more than half of all customer transactions in 2016 ¹².

While the uptake of cashless payment methods has increased rapidly across demographics, there is still some segmental variation. It appears that younger

and more affluent customers, as well as those living in urban areas, tend to use these payment methods with more frequency. This can be attributed to the fact that payment infrastructure in some regions of the country does not always support cashless options, among other reasons. In fact, recently published research in the Access to Cash Review Report points out that 17% of the population – over eight million adults – would struggle to cope in a cashless society ¹³.

Small and medium sized businesses have broader needs than individual consumers when it comes to payments. All of the experts who were interviewed as part of this research project felt that the payment infrastructure for SMEs felt rather outdated compared to the personal sector space, and that banks ought to do more to facilitate the financial needs of businesses. Activities such as paying staff and suppliers, invoicing and transactions are all areas where SMEs could be better supported by financial institutions. Richard Johnson points out that invoicing still tends to be a real pain for SMEs. He says that most invoices are still processed via email and can typically only be carried out electronically if the customer is part of the same network. There are already a number of startup financial providers that take an innovative approach to invoice finance.

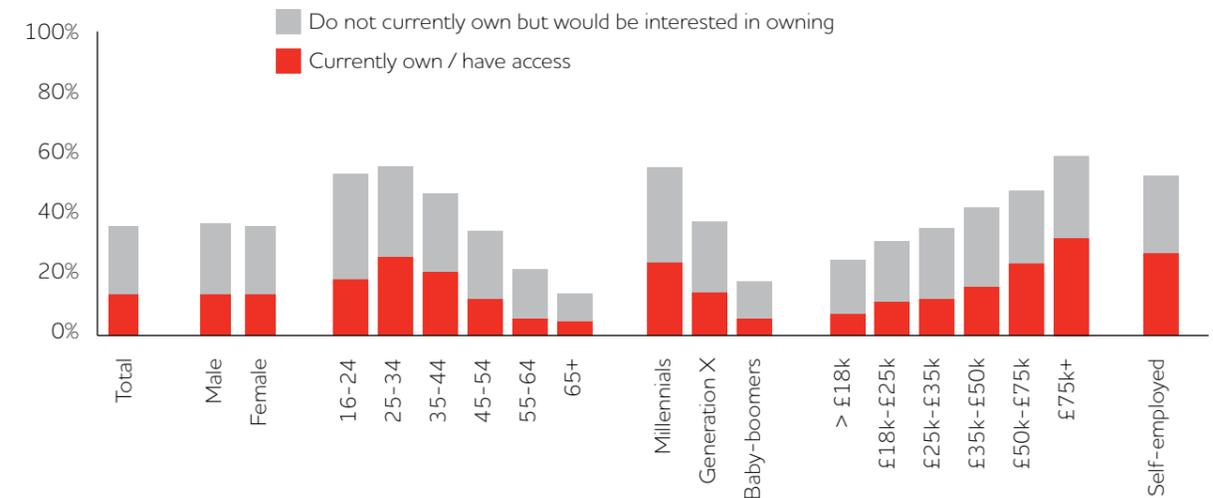
Investly is an invoice finance platform that allows small businesses to easily upload invoices and get paid quickly with the best rates. The company received a new financing round in early 2018 and was one of the finalists in Nesta's Open Banking prize.

Other areas that could be improved for SMEs are payments and transactions. Currently, providers such as TransferWise offer low-cost international transactions, which are beneficial to small businesses. Furthermore, payment systems are evolving fast and financial institutions are advised to keep pace with the technological developments. Companies such as PayPal and Stripe provide intuitive online payment processing for individuals and businesses, again facilitating ease and convenience for SMEs in this space.

“Which of these do you personally own or would you be interested in owning?”

A wearable device that connects to the internet (e.g. a smart watch or smart wristband) | 2018

Source: Foresight Factory Research | Base: 4,216 online respondents aged 16+, GB, 2018 July



NEXT: Wearables, biometrics and social payments

In the medium term we expect wearable devices to be increasingly used as a payment method. The adoption of wearables is part of a wider narrative where digital devices will permeate all areas of consumer technology, but will also be more seamlessly connected and less intrusive. When it comes to payments, wearable devices enable easier and more convenient transactions – and their popularity is growing, especially among younger demographics. Currently, 17% of consumers own a wearable device, rising to 29% of Millennials and 39% among those earning more than £75,000 per annum.

Launched in June 2017, Token is a wearable ring that can make payments, act as house keys, and can be used instead of passwords as well as acting as a fitness tracker. The ring has a fingerprint scanner and optical sensors which recognise when the ring has been taken off and can lock all credentials in response for security. The company aims to make authentication quicker and more convenient, whilst keeping transactions secure.

Over a five year time horizon, the usage of wearable devices for payments will start to be complemented and ultimately be replaced by biometric payment methods. Fingerprint payments come to mind first for most people, but we may also consider other biometric applications such as facial recognition technology, iris scanning and voice powered authentication. A small proportion of consumers are already using mobile biometric payment

methods such as Apple's fingerprint scanning or Face ID to authenticate payments, but we expect more widespread adoption to occur over the medium term. There are a number of reasons for this relatively slow adoption cycle: 1) consumer anxieties about data sharing and privacy will need to be assuaged, 2) the infrastructure will need to be rolled out mass-market to ensure biometric payment methods can be used, and 3) biometric payments must become more convenient options for consumers than current payment methods.

For the 32nd Olympic Games in Tokyo in 2020, the host city has taken steps to introduce a biometric payment system. Upon arrival guests will receive the option to scan their fingerprints and link them to their debit or credit card, after which they can pay in venues such as restaurants, hotels and souvenir shops by scanning their finger. The system will be trialled in the run-up to the Olympics and is hoped to increase security, preventing financial fraud and muggings, while also providing the Japanese Government with a rich bank of consumer analytics.

Furthermore, we anticipate social payments (i.e. integrating money transfers in social media interactions) to become more commonplace in three to five years from now. Many social media networks and messaging apps now include simple financial capabilities, such as sending payments to peers or paying for goods and services. Initially used for simple peer-to-peer payments, most platforms have now extended their features to allow users to make both offline and online purchases. These

¹¹ Analysis of all card transactions processed by Worldpay in the UK, June 2017 - June 2018.

¹² British Retail Consortium, annual Payments Survey (2016).

¹³ Access to Cash Review – Interim Report (December 2018) & Final Report (March 2019).

services are more than simple value exchanges, as they embed social elements too, allowing payments to be integrated into message exchanges.

At the **Apple Developer Conference** in early June 2017, the brand announced a new feature of iOS 11: peer-to-peer payments through **Apple Pay**. It allows users to send and receive money directly from their contacts via **iMessage**, using the company's contactless payment system. Users will be able to choose from all the debit and credit cards in their **Wallet**, authenticate payments with **TouchID** and their contact will receive the money in their **Apple Pay Cash** account. They can then transfer the money to their bank.

Adoption in the UK is currently still relatively low, with only 6% of consumers having used a chat messenger service to transfer money to another person and a further 15% not yet having used it but who are interested in doing so¹⁴. In Asian markets, we find that a large proportion of consumers already use this payment method with regular frequency. In fact, these platforms first emerged in Asia, where social messaging apps form an integrated hub of many consumers' digital lives. Companies such as Tencent (the parent company of WeChat) and Alibaba have pioneered in this area with their multi-purpose messaging, social media and payment apps. These so-called 'everything apps' deliver a wide range of services – from mobile payments to loyalty programmes, from bill sharing to hotel bookings – and comprise an all-encompassing digital ecosystem where users in principle never need to leave the app.

The popularity of these payment systems is underscored by the fact that Ant Financial (formerly known as Alipay) is the highest valued FinTech company in the world with a valuation of \$150 billion¹⁵. We anticipate that more widespread adoption of social payments in Europe will occur over the next few years as social media applications start to provide a wider set of services to consumers – providing convenience, simplicity and a social element to payments.

FUTURE: The Internet of Things and cryptocurrencies

Over the longer term, we anticipate that the Internet of Things (IoT) holds promising applications for future payment methods. Going forward we can expect many more of our personal possessions to gain access to the internet. Previously "analogue" objects will be accessible to control or monitor via a smartphone app or control hub; soon to be found with growing frequency inside homes, offices and vehicles. Appliances such as fridges will be able to automatically pay for items that are running low. Naturally, these connected devices won't have an in-built payment account themselves, but will rather operate via tokenisation, i.e. each device and

appliance will have its own identifier within a wider connected system.

Our research shows that 14% of consumers have already controlled a household appliance by using a smartphone app, with a further 30% being interested in doing this in the future. We anticipate that the adoption of smart home appliances will grow substantially over the coming years, driven initially by the uptake among younger and more affluent demographics.

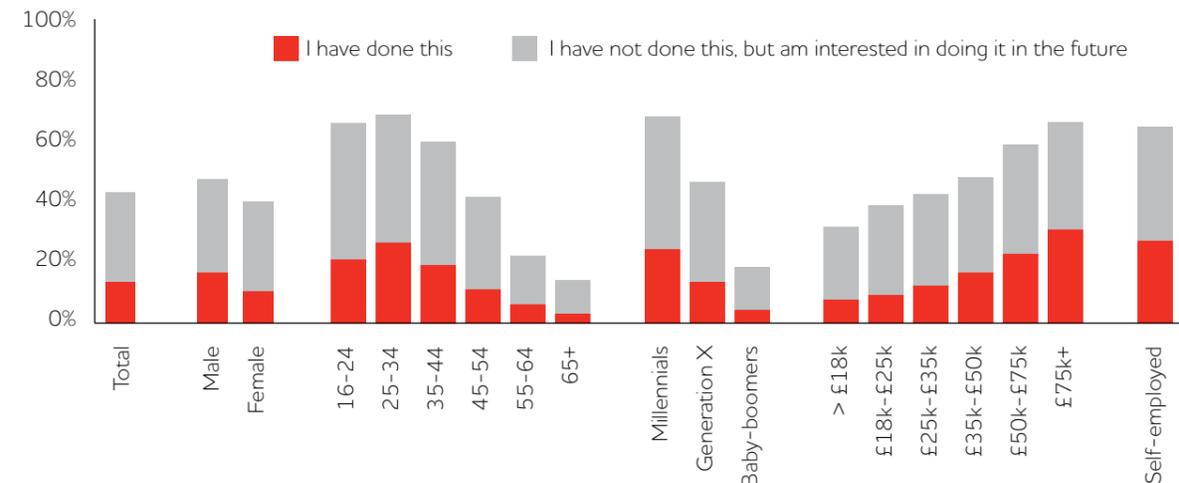
The Internet of Things is set to disrupt personal finances and payment methods for individual consumers, but might also have applications for businesses. For instance, companies could have their inventory automatically monitored on a continuous basis by banks, which would render real-time and in-depth insights to inform decisions about lending or adjusting credit lines. Companies such as Visa are already heavily investing in the IoT ecosystem space and are exploring a wide range of innovation possibilities and partnerships. As payment providers start to develop IoT applications further and the technology underpinning it becomes more sophisticated and useful to people's everyday lives, we anticipate a rapid adoption cycle over the next five to ten years.

Lastly, a development to be mindful of in the payments space is the uptake of cryptocurrencies. At the inception of blockchain technology in 2009, bitcoin tokens were given to "miners" who verified transactions on the bitcoin blockchain – for example, verifying the receipt of money from one individual to another. The purpose of the tokens was as a reward, and with a finite supply their value was projected to increase. By mid-June 2018 the cryptocurrency market capitalisation had reached a value of \$280 billion across 1,600 different currencies. Bitcoin, the coin with the largest market capitalisation, reached a record high of almost \$20,000 per coin in December 2017 – up from \$1,000 less than 12 months earlier. At the time of writing (mid-January 2019), the value of bitcoin had plummeted again to its lowest price since September 2017. Given the volatility of cryptocurrencies, many commentators are sceptical about their potential for longevity. Although some incumbent financial institutions are experimenting in this area, the real applicability and use cases for the everyday consumer remain minor.

Despite scepticism surrounding cryptocurrencies, we find more optimism around the blockchain technology underpinning them. Peter Simpson comments the following: "I have no doubt that blockchain technologies will be increasingly used. The background technologies will become commonplace quicker than we think. Whether the actual currencies themselves are going to be

"Which of these things have you done already and which are you interested in doing in the future?"

Controlled a household appliance by using a smartphone app | 2018
Source: Foresight Factory Research | Base: 4,217 online respondents aged 16+, GB, 2018 July



in the hands of mass market consumers in five to ten years remains to be seen. I cannot see where the advantage is for most consumers making most payments."

Clearly cryptocurrencies are a contentious issue and there remains much uncertainty about its potential future use. We find that there is currently a lack of true understanding and distrust among the wider public as well as a paucity of applications that could fulfil unmet banking and payment needs. Blockchain, however, appears to be much more promising from a security and verification perspective – which we will discuss further in the next chapter.

¹⁴ Source: Foresight Factory Research Base: 4305 online respondents aged 16+, GB, 2017 August

¹⁵ Source: CNBC, "China's Ant Financial reportedly raises \$10 billion at \$150 billion valuation, May 2018

THEME IV – TRUST, SECURITY AND VERIFICATION

Consumer trust in the financial services industry is relatively low. Banks can build trust by tackling cybercrime issues, and by enabling more secure authentication and improved identity verification.

NOW: Trust and cybercrime worries

As was demonstrated at the beginning of this report, the financial services industry has been experiencing a trust deficit ever since the financial crisis a decade ago. Even though the banking sector has regained trust among the general public in the past five years, it is still the lowest-trusted sector compared to other industries. Moreover, research from the Financial Conduct Authority (FCA) shows that roughly an equal amount of British consumers have confidence in the financial services industry as opposed to those who do not. Especially 18-24 year olds and those over the age of 55

lack confidence in the financial services industry. Although trust in the industry as a whole has been lacking, people do still seem to fundamentally trust their own bank to manage their money responsibly and only a small minority of respondents from our research indicated to have switched their current account provider in the last 12 months.

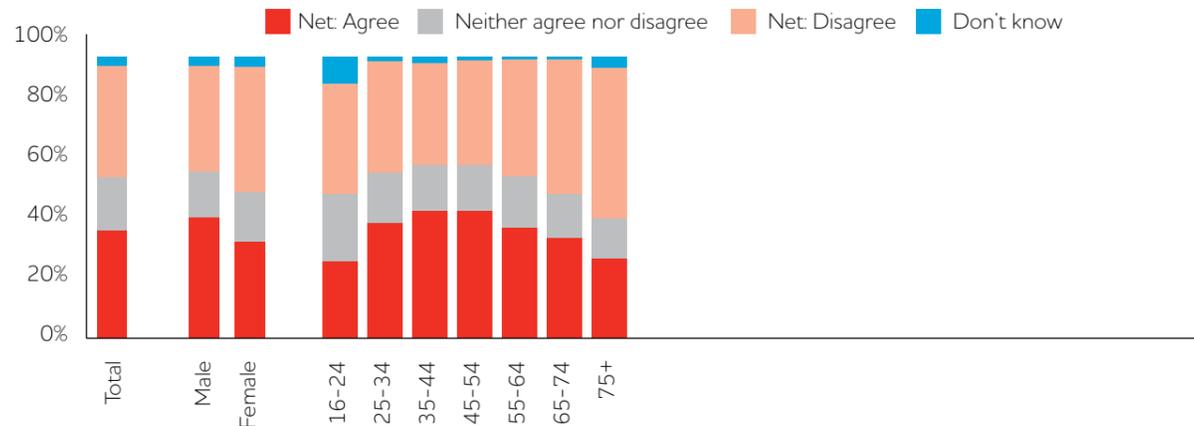
One caveat to the erosion of trust in the banking industry overall relates to how a financial institution positions itself towards customers. Regional and local banks haven't necessarily experienced the same erosion of trust, as predominantly the bigger banks were held responsible by consumers for the financial crisis. It is therefore in the interest of smaller players to emphasise customer understanding and play heavily on their loyal customer base. For example, Nationwide has positioned itself more as a building society than a bank to underscore trust and responsibility.

Part of the trust narrative also concerns safeguarding sensitive consumer data. Particularly the recent Facebook and Cambridge Analytica scandal brought the issue of data breaches and

“How much do you agree or disagree with the following statements?”

I have confidence in the UK financial services industry

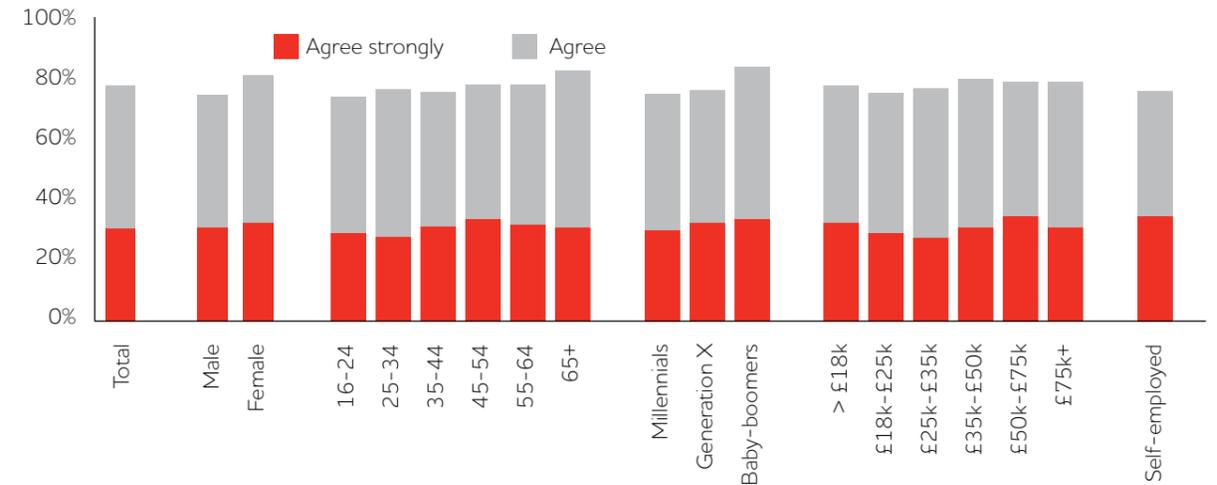
Source: FCA Financial Lives Survey / Foresight Factory Research | Base: 12,865 UK adults, October 2017



“How strongly do you agree or disagree with the following statements?”

I would like more control over the personal information I give companies and the way in which it is stored | 2018

Source: Foresight Factory Research | Base: 4,137 online respondents aged 16+, GB, 2018 July



online privacy issues front of mind for many consumers. Our research indicates that nearly three-quarters of respondents would like more control over the personal information they give to companies and the way in which it is stored.

Small and medium sized businesses might be less concerned than individual consumers when it comes to sharing financial information with banking institutions. Although similar demands for security and responsibility apply, businesses are not actually giving away their own personal details, but are rather providing corporate financial information. Mark Curran acknowledges that worries around data sharing tend to be less pronounced among SMEs in favour of convenience, which makes them an attractive target audience for new banking propositions. Nevertheless, he points out that an important challenge in this regard comes from a PSD2 compliance perspective, which is a lot more difficult to achieve when dealing with businesses with more complex financial requirements.

External security threats to the safeguarding of our personal financial information have also gained prominence over the past years. A significant proportion of consumers now claim to feel personally at risk from cybercrime, which is perhaps unsurprising given the growing list of cyber attacks – from the hacking of celebrity cloud accounts to the ransomware inceptions of huge industry and state-run networks. Indeed, research from the European Commission in 2017 showed that a total of 86% of consumers in the UK believe that the risk of becoming a victim to cybercrime is increasing.

Looking towards the future, as the penetration and sophistication of IoT devices evolve, and consumers share more and more data online (knowingly and unknowingly), we anticipate a rise in cybercrime awareness and interest in services to counter both malware and ransomware viruses and the theft of personal data. Particularly with the introduction of Open Banking and GDPR, issues of security and sharing financial data will become more important to consumers going forward.

In this context, there is a clear opportunity for financial institutions to do more to assuage concerns about cybercrime. Brands that educate both individuals and businesses around information security and the prevention of virus attacks can become a trusted partner for their customers in the digital era. Guidance will help to minimise fear and there is plenty of space for brand collaboration in this area. Peter Simpson argues that banks haven't taken as many steps as they should to address cybercrime worries amongst their customer base. He states that "the issue of cybercrime is something that banks need to take much more seriously. I think consumers feel significantly at risk and my feeling is that banks aren't doing much to help them." According to Simpson, the banks that will take the initiative first on this matter will obtain a significant advantage over other players in the industry.

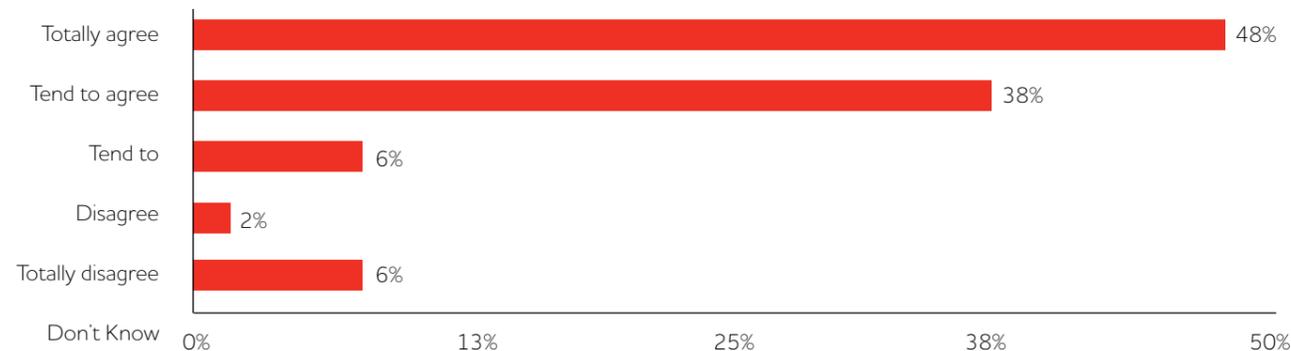
NEXT: Biometric authentication and RegTech

In the previous chapter we considered at what point biometrics would start to be used mass-market in the UK for payments. Naturally, biometric applications also have an important bearing on

“How much do you agree with the following statements?”

The risk of becoming a victim to cybercrime is increasing | 2017

Source: European Commission | Base: 1,380 online respondents aged 15+, UK, 2017 June



authentication and verification. With the average consumer holding passwords across a host of sites, demand has increased for a one-stop solution that can act as a universal identity verifier. Biometric identification techniques, already introduced on many passports around the world, are increasing in importance in the financial sector – promising increased security in accessing one’s account and carrying out banking activities.

Mastercard started trialling a credit card with a fingerprint scanner instead of a four digit PIN in April 2017 in South Africa. The company expects to expand the technology soon elsewhere in the world. The card is embedded with a sensor and an encrypted digital template of the cardholder’s fingerprint. Users hold their finger against the sensor when the card is in the reader to verify a transaction. Mastercard’s aim is to increase card security as biometric authentication cannot easily be replicated or stolen.

In many ways, biometric authentication is much more secure and effective in fraud prevention compared to conventional passwords that are currently still used by the majority of financial institutions. Our research shows that 20% of consumers have already used their fingerprint as a form of identification, with another 28% who have not yet done this but would be interested doing it in the future. Especially younger, affluent and self-employed consumers over-index strongly here compared to other demographics.

Behavioural biometrics is also anticipated to be increasingly deployed for smart authentication

purposes. Seamless authentication and verification of identity on digital devices will be bolstered by behavioural biometric technology, which will be able to more accurately detect fraud through tracking a user’s mouse movements, key strokes and location in real-time. For instance, if someone tries to log in to their bank account from an unknown location, stronger authentication can automatically be invoked.

We also expect to see a proliferation in financial institutions harnessing regulatory technology, or ‘RegTech’, in order to improve and automate regulatory processes and ensure compliance with banking regulations. Investment in regulatory technology is gaining momentum and is expected to grow significantly over the next years as a result of the recent implementation of PSD2 and Open Banking in the UK as well as GDPR. In this environment, financial institutions will look for more efficient and automated methods to fulfil compliance obligations and Open Banking requirements at a lower cost.

Although regulatory technology is still in its infancy, an increasing number of companies and startups are utilising new technologies such as machine learning to provide useful RegTech applications for financial services providers. As an example, IBM is currently in the process of training its AI system Watson to assist banking professionals in meeting their regulatory responsibilities.

Naturally though, most RegTech is practically invisible to customers as it mainly affects back office processes.

Nonetheless, we believe that a broader definition and application of regulatory technology could have an impact on customers and their banking experience. As Richard Johnson points out, “the places where RegTech does become visible is when we stretch the definition to include things such as AML [anti-money laundering] processes. Then things like remote identity verification (e.g. being able to take a selfie for identity verification) will become a bifactor.”

FUTURE: Blockchain technology and Big Tech

A range of tools and resources grounded in blockchain technology could support the 21st-century quest for trust and transparency. Blockchain technology promises to allow institutions to provide third party verification, thereby reducing fraud and boosting trust and efficiency. Products such as smart contracts enable anonymous parties to conduct transactions in a traceable, transparent manner – with benefits for customers including faster resolution of claims and applications. We believe there is enormous potential for blockchain technology, with one

application being smart blockchain-based insurance policies in the insurance sector.

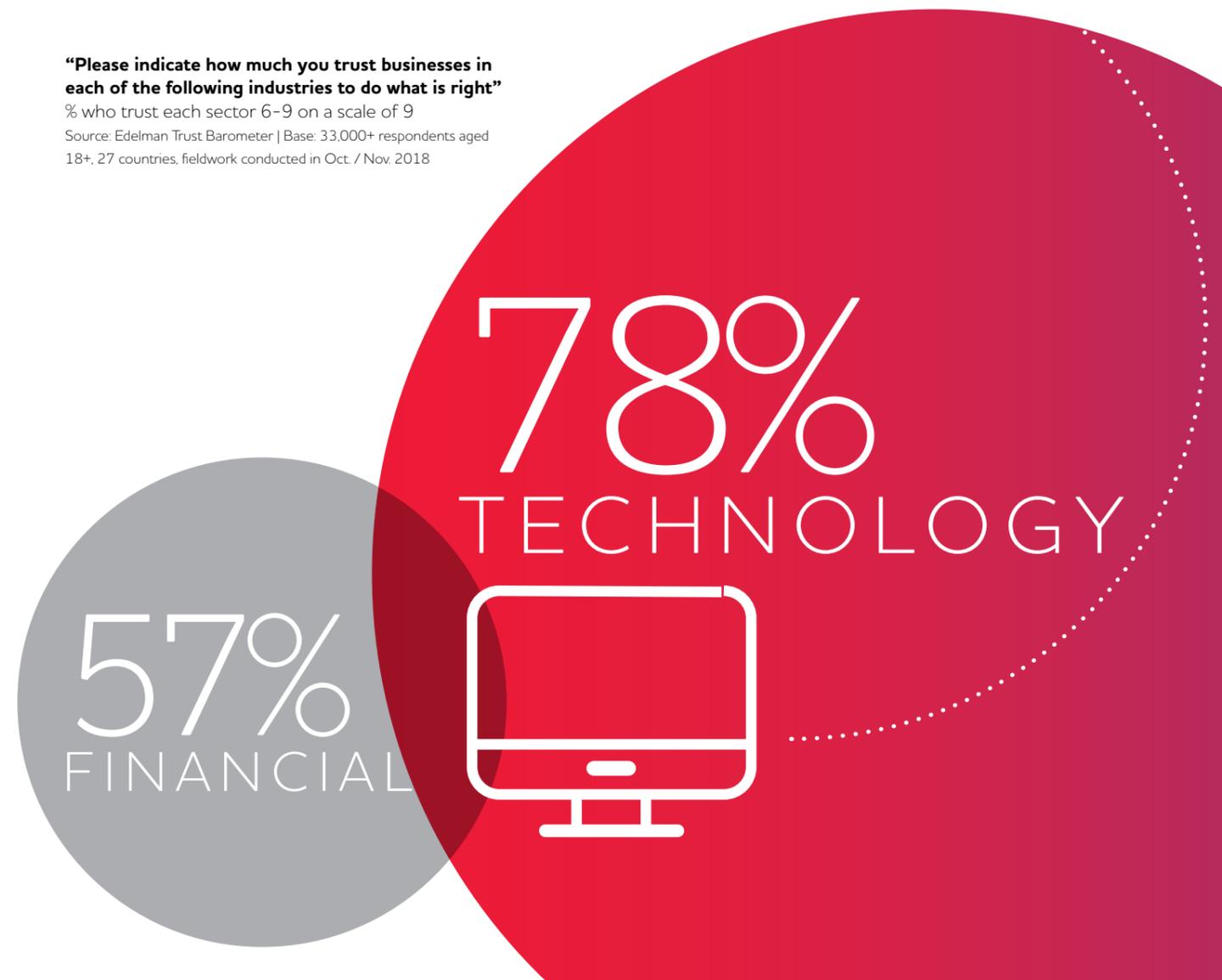
In June 2017, AIG partnered with IBM to develop a blockchain-backed smart insurance policy. The companies ran a pilot using smart contracts, with the aim of better understanding how blockchain can reduce friction, increase security and improve the customer experience.

Blockchain technology also has potential implications for secured and verified online identities. We imagine a future in which there exists a universal digital identity for every individual, offering instant verification, uninterrupted experience and heightened security. What’s more, we envisage that this identity holds within it one’s social and commercial reputation as well, taking into account lifestyle behaviours and spending habits. This so-called digital passport has the potential to create an Internet of People, allowing for more intelligent and interactive connections between individuals

“Please indicate how much you trust businesses in each of the following industries to do what is right”

% who trust each sector 6–9 on a scale of 9

Source: Edelman Trust Barometer | Base: 33,000+ respondents aged 18+, 27 countries, fieldwork conducted in Oct. / Nov. 2018



and businesses. Such a universal and verified digital identity ecosystem would provide a clear societal and commercial benefit by reducing fraud, increasing trust among consumers and providing banking services to the unbanked.

*Presented at the **G20 High Level Forum for Forcibly Displaced Persons** in May 2017. **Taganu** aims to be a bank for all, particularly refugees and other displaced persons who have had to feel their homes with few possessions. The bank uses a blockchain based digital ID to prove identity, and allows people with limited access to documentation to open a bank account.*

Over the longer term, we expect to see an increasingly crowded financial services landscape within which incumbent financial institutions will operate. They are currently facing strong competition from startup banks for a wide range of ancillary financial services and will need to work hard to maintain a loyal customer base – especially among younger demographics. However, a counter-argument that is often raised in defence of incumbent financial institutions is that they could collaborate with these new financial providers or simply acquire them if necessary.

While FinTech companies are indeed the current rivals to incumbent banking institutions and are driving a lot of the financial innovation at the moment, we anticipate that large technology companies such as Amazon, Google and Apple will ultimately pose the biggest threat to the incumbents in the future. These Big Tech firms have already gained a foothold in a variety of different industries and are now taking aim at the financial services sector, with some already offering basic financial products including insurance policies and everyday savings accounts.

*In March 2018 the **Financial Times** reported that **Amazon** is in talks with **JPMorgan Chase** to develop an Amazon bank account. The current account would be available to Amazon customers, and follows the expansion of Amazon Lending (providing loans to small businesses) in June 2017.*

Naturally, concerns about these technology brands holding too much personal data on consumers and the potential for misuse might lead some to argue that consumers will not want to use these companies for financial services. However, the convenience and personalisation offered by these brands is likely to be an enticing proposition for many. Alongside this, a lack of trust in the technology giants does not seem to be an issue at the moment. According to the Edelman Trust Barometer, the financial services industry is the lowest-ranked sector among all industries in their

survey, while technology is ranked as the most trusted sector.

Technology companies like Tencent have offered payment services (WeChat Pay) in Asia for some time, while Apple Pay is becoming a go-to option in Western markets, demonstrating consumer acceptance of financial offerings from tech brands. As we mentioned earlier in our report, in Asian markets so-called 'everything apps' are enabling consumers to manage all their activities in one umbrella app – from managing finances to booking a restaurant. We may start to see these kinds of all-encompassing apps in Western markets soon too and they naturally appeal to the consumer desire for convenience and simplicity.

However, there are likely to be regulatory issues as these companies move further into the financial services sector. Providing financial products is more tightly regulated than payments, so it will likely prove harder to launch as regulators seek to stabilise the sector. Yet beginning with the implementation of PSD2 in Europe, we expect regulation to become more favourable for new entrants. FinTech and Big Tech could ultimately be used predominantly for ancillary financial products and services, as these propositions have lower barriers of entry and offer potentially more lucrative avenues, with incumbent financial institutions providing the underlying core banking services (or 'plumbing') to customers.

“While brand perception of financial institutions might not be too good, people still fundamentally trust them to look after their money.”

Richard Johnson

CONCLUDING THOUGHTS

▲ The financial services landscape will be transformed as a result of technological disruption and regulatory changes. New market entrants such as FinTech startups and Big Tech companies will result in a more crowded and competitive environment where incumbent banking institutions need to elevate their innovation planning as one of their top strategic priorities in order to succeed.

Despite such a rapidly evolving industry, the core consumer needs have remained rather similar. Banks are still expected to deliver ease and convenience, show customer understanding through tailored products and services, and establish themselves as trustworthy and reliable institutions.

Yet the ways in which banks should respond to these underlying consumer needs will require a different approach going forward. To this end, it will be crucial to harness new technologies for banking applications – whether through redeveloping internal processes or establishing strategic partnerships. However, amidst the emergence of various new tools and services, the proliferation of start-up banks and overall investment in FinTech gathering momentum, it can be difficult to ascertain which areas present veritable growth opportunities.

Our research has underscored the importance of customer-centricity in financial innovation in order to develop relevant propositions in money management, customer service, payment methods, and trust and security. Naturally, there

will be segmental variation amongst customers and SMEs when it comes to their banking needs and therefore requires a nuanced approach in deploying new financial products and services to ensure receptiveness.

Concomitant to such action, financial institutions will need to strongly consider and evaluate their own position in the marketplace. Future banking propositions often centre on the introduction of new ancillary services, but banks are also encouraged to build on their existing strengths and focus on the provision of core financial products. For incumbents this entails emphasising longevity and expertise, human interaction and a physical presence, and an understanding of the local or regional community.

The evolution of the banking industry presents both challenges and opportunities, but financial institutions that are able to employ a customer-centric innovation strategy while simultaneously maintaining their advantages as incumbents will succeed in the future.

METHODOLOGY

▲ Foresight Factory conducted an extensive and in-depth research programme for the purposes of this report, drawing upon a range of tools and methodologies.

The initial stage of the research was a review of Foresight Factory's proprietary database of 80+ trends, which monitor evolving consumer behaviour and technological change, underpinned by original research. At this stage, the most important societal and technological trends impacting the future of banking were identified and evaluated. In our trends analysis we evaluated overall consumer attitudes and interests related to banking as well as the more granular differences between gender, age, income and employment status – the latter in order to ascertain how the needs of SMEs might differ from individual consumers ¹⁶.

The evidence base provided by the trend review was supplemented by an extensive literature review of publicly available research to ensure all relevant third party information was examined. Alongside this, a comprehensive study of successful innovations in the financial services industry was combined with data forecasts of changing consumer needs in order to anticipate how banking infrastructure might evolve over the medium (three to five years) and longer term (five to ten years).

While the 'now', 'next' and 'future' perspectives throughout the report showcase technological innovation and industry developments, their division mainly pertains to widespread consumer adoption. For example, virtual reality has already been utilised by some brands and we are witnessing early consumer interaction with the technology, but we expect mass adoption of virtual reality for banking purposes to only occur over a longer term horizon of five to ten years.

The results were then used to develop a discussion guide, which was employed to conduct a set of qualitative interviews with leading experts in the field. In total, five expert interviews were conducted with leading thinkers in the financial services industry who provided invaluable insights into the future shape of banking for consumers as well as small and medium sized enterprises. An overview of each of the experts interviewed for this report is provided above.

The key insights and outputs of each stage of the research programme have been synthesised and applied throughout this report.

ALONGSIDE THIS, A COMPREHENSIVE STUDY OF SUCCESSFUL INNOVATIONS IN THE FINANCIAL SERVICES INDUSTRY WAS COMBINED WITH DATA FORECASTS OF CHANGING CONSUMER NEEDS IN ORDER TO ANTICIPATE HOW BANKING INFRASTRUCTURE MIGHT EVOLVE OVER THE MEDIUM (THREE TO FIVE YEARS) AND LONGER TERM (FIVE TO TEN YEARS).

¹⁶ Foresight Factory defines generations as such: Baby-boomers (1945-1960), Generation X (1961-1981), Millennials (1982-1999).

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Jasmine Birtles: Financial journalist and Founder of the Money Magpie website, which advises consumers on managing money.

Mark Curran: Director of Payments and Open Banking at CYBG.

Richard Johnson: Former Head of Internet and Telephony at RBS and former Head of Strategy at NatWest Retail. He is currently an advisor on digital banking.

John Makin-Shaw: Former Senior Manager, Customer Strategy at HSBC and former Head of Innovation at Direct Line Group. An original thinker with considerable knowledge of FinTech.

Peter Simpson: Co-Founder of First Direct and Co-Founder of Ffreedom Family Finance. He is currently a marketing consultant to the financial service sector.

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