

Digital Disruption: UK Banking Report

March 2015

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About the BBA

The BBA is the leading trade association for the UK banking sector with 200 member banks headquartered in over 50 countries with operations in 180 jurisdictions worldwide. Eighty per cent of global systemically important banks are members of the BBA. As the representative of the world's largest international banking cluster the BBA is the voice of UK banking.

We have the largest and most comprehensive policy resources for banks in the UK and represent our members domestically, in Europe and on the global stage. Our network also includes over 80 of the world's leading financial and professional services organisations. Our members manage more than \pounds 7 trillion in UK banking assets, employ nearly half a million individuals nationally, contribute over \pounds 60 billion to the UK economy each year and lend over \pounds 150 billion to UK businesses.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 319,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US\$30 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com. For more information on becoming a member and working with the BBA, visit:



www.bba.org.uk/membership

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Executive Summary

Digitisation is changing many industries across the world and altering the way we as individuals and companies operate. Banking is no different. While banking has been on a path towards digitisation for a number of years, it is the advent of the mobile device that has dramatically accelerated the pace of change. We have gone from almost nobody banking via their phone to millions of people using their apps to check their accounts and make payments every day.

This is changing not just the way we bank but also the way banks have to interact with us. The number of people going into branches to do their banking is falling dramatically (by around 30% in the last three years) and visits are often now for more complicated issues. New products, such as cheque imaging, will reduce the need to go into a branch still further. Likewise contactless cards, faster payments and Paym diminish the need to use cash. Banks are reconfiguring their branches and call centres to deal with these developments.

In this document we look at the challenges and opportunities from the digitisation of banking.

A leading driver of both trends is changing customer behaviour. People are accustomed to using digital applications in all areas of their life and now expect them to work quickly, efficiently and seamlessly. They assume they will be able to find what they want easily and have it delivered at a time of their choosing and convenience. When someone logs in to their bank app they anticipate the same level of service as they get from using Amazon, eBay or Facebook. Banks are going to have to rise to this challenge, as are regulators. They will need to build in as much functionality as they can into their mobile and internet portals to enable customers to do as much of their banking online as they want.

The task for banks is to ensure that the customers understand what they are signing up to and what they are doing with their accounts. For example, banks need to make sure that customers have read and understood the terms and conditions of any financial product bought online. Regulators and banks have to agree a way of achieving this. In some ways digital should help because it will be possible to see how long and how extensively a customer has looked at the fine print.

But digital also offers opportunities. These can be broadly split into revenue generation, cost saving and the customer experience. A customer banking online is far cheaper than a customer banking in branch or via a call centre. But the customer can also drive the process. Banks now offer online mortgage applications, which save the customer considerable time because they can have the all the information at hand to fill out the application. Customers may also in the future be able to tailor credit and other products to meet their requirements.

Many of these products are no longer coming solely from within the banking industry. Digital is helping to break down barriers to entry and the pressure is on to ensure that banks are as up to speed as their potential competitors in the products and services they are offering. The likes of PayPal and TransferWise are already making waves in the payments space. Indeed, our research has led us to the conclusion that the biggest threat to the banks may well come from competitors targeting key parts of their business. US tech giants Apple and Google almost certainly do not want to become fully fledged banks but

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they want to offer banking-type services to their customers. The question for regulators is at what point does a non-bank become a bank?

Even new banks are divided on whether to offer universal services. The ability to have a reduced branch network is assisting this process. Metro Bank, for example, wants to build up to around 200 stores¹, a fraction of what the incumbents have but sufficiently large to give it a significant footprint when combined with its mobile offering. Atom Bank is not looking to open any branches at all.

This contrasts to more established banks whose task it is to ensure that their omni-channel offerings are seamless, so that a customer feels at ease whether they are walking into a branch, using the app or talking to someone on the phone. That will require a reconfiguring of their services and retraining of staff.

Another challenge for the banks is to modernise their IT systems to enable the more advanced digital services to be delivered. There has been much debate about legacy banking systems and their complexity. While modern middleware allows the banks to insulate their digital offering from their core systems, eventually they will have to be replaced by more advanced and simpler systems. This is a major test for the banks given the pressure from regulators and politicians to ensure continuity of service, particularly as customers are increasingly used to being able to access banking services 24/7.

Big data is arguably the biggest potential opportunity for both banks and their customers. Used in the right way it should enhance what a bank can offer a



customer, enabling products to be offered in both a tailored and timely fashion. That should mean fewer unpleasant credit surprises for customers. Banks should be able to make better credit decisions too.

Digitisation of banking services does not just provide challenges to banks, but also to regulators charged with reducing misconduct and ensuring financial stability. There is always a risk that regulation can squeeze misconduct and prudential risk out of the regulated sector into the non-regulated sector. However, this regulatory arbitrage can be massively amplified and accelerated by the digitisation of financial activities. This was what happened with payday lenders, whose activities were limited in scale until the advent of internet and big data, which enabled their businesses to balloon, unconstrained by regulation. It is not in the interests of either consumers or the economy if digitisation leads to misconduct and risk being squeezed out of the regulated sector to the unregulated sector. The balance that regulators must strike is protecting consumers and ensuring stability, while not hampering innovation or competition. That can be done by focussing on regulating activities rather than merely institutions, ensuring a level playing field between the banking and non-banking sector.

What this report shows is that banking ten years hence is likely to be dramatically different from today. There will be more competitors in more channels. Customers will have more choice. Banks should be able to provide their customers with a much enhanced service, available at a touch of a button. If the banks get it right then everyone can be a winner but it is a massive challenge and the journey has only just begun.

¹Source: http://www.economist.com/news/britain/21620259-scampering-opposite-direction-big-banks-branch-bites-back



James Barty Strategy Director, BBA





MD, Accenture

The digitisation of banking is potentially one of the biggest single changes to the banking sector in recent memory. The sector has long since digitised the holding of money. Yet for many years this operated in the background. The advent of the internet and the smartphone has transformed the ability of the customers to access their accounts digitally.

The BBA's "The Way We Bank Now" research highlighted how quickly this is changing customer behaviour, with millions now accessing their accounts and making payments online.

This report looks beyond digital uptake by assessing the challenges the banking sector faces and how customers might see their banking experience change beyond all recognition in the years to come.

We would like to thank Accenture for their resources and thought leadership. Hopefully together we have been able to produce a document that captures the threats and opportunities that the industry faces in the years ahead.

The UK banking sector has made significant strides in grasping the opportunity that digital has brought to the market.

Our expectation is that the pace of change will accelerate as digital brings more opportunities and threats to the existing banks and new entrants.

This report builds on the recent work done by the BBA and shines a light on some of the emerging challenges "Digital Disruption" brings to our sector.

We would like to thank the BBA for collaborating with Accenture on this report.

Introduction

Banking is an inherently digital industry – all of our accounts, our salaries, our transactions and so on are merely numbers. Historically the method of storing this was on paper in the form of ledgers and accounts. The banking industry some time ago converted much of this into digital form, yet we as customers noticed little difference. We paid many things by cash or cheque, received our account statements monthly and if we wanted to know our account balance it involved a trip to a branch or a cashpoint. Large payments were made electronically, but that too involved a trip to a branch or a phone call. Initially that changed slowly, with the advent of credit and then debit cards, but in the last few years the pace of change has accelerated dramatically.

First of all we could access our accounts via a website, order cheque books and cards and make some payments online. Then with the advent of the smartphone, the development of news apps and new banking operations, such as Faster Payments, there has been another dramatic leap forward. Now we can check our account multiple times a day, make payments through the app which arrive in other people's accounts in a matter of minutes, order new cards, stop cards, check our accounts while abroad and so on. Not only can we look at our accounts as often as we want, but banks will send us texts or other electronic messages if we are about to cross certain limits or we are about to incur charges. Increasingly bank products can be purchased online too.

This is changing the banking industry with branch usage falling and the demands placed on bank staff, either in branch or online, changing from facilitators of transactions to people who answer our queries and solve our problems. Digital awareness is now a pre-requisite for most jobs in banking.



The BBA's initiatives on digitisation have included a research programme featuring "The Way We Bank Now", and the hosting of two dinners and a conference, sponsored by Accenture, on the topic. This has provided the basis for this document where we wanted to not only outline how far the industry has come but also to summarise the challenges and opportunities that stem from the digital revolution in banking.

We have built this publication around three themes.

In Part One we look at the progress made by the banks towards digitising their product offering to customers, how this is changing customer behaviour and how the banks are responding. We also discuss a number of current trends.

In Part Two we explore the challenges brought about by digitisation. These include the demands of customers, who want their bank's digital product to be every bit as effective and flexible as when they use Amazon, Google, Twitter, eBay and so on. We consider the strain that this might put on existing bank IT systems as they look to meet the increased demand offered by digital, create new flexible solutions and ensure that the established IT systems continue to operate to allow customers 24/7 access. We also look at the possible competition from those non-bank players and new bank competitors, be they digital-only banks (such as Atom or Starling) or those leveraging newer IT platforms and digital to offer something different from the established banks for customers (such as Tesco Bank or Metro). We go on to consider new non-bank competitors like PayPal or TransferWise who are competing in specific parts of the banking space. Finally we consider the regulatory challenge created by

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the digitisation process. How will regulators ensure a level playing field when established banks have to meet ever increasing regulatory demands while potential new entrants can come in and try to take bank business without the need to become banks (and therefore submit themselves to full blown bank regulation)?

In Part Three we look at the opportunities created by digitisation. These are not just cost-saving opportunities. Indeed, the established banks argue that it is far too simplistic to look at digital as a pure cost-saving device. It is also around what digital can offer customers in terms of new experiences. How can banks utilise richer data to tailor their products to their clients more effectively? How can they use digital to guarantee that the clients choose the right products and that the banks have a digital paper trail to evidence this to the regulators? How can banks use digital to ensure that all channels combine to provide customers with one joined-up service? Can banks use new forms of technology such as biometrics to ensure that customers can access their accounts more effectively?

In producing this paper we have been given generous access to many of the heads of digital and innovation at banks large and small. Without their help this paper would not have been possible. We hope the end result provides an insight into the future of digitisation and banking.

Part One

The rise of digital and how the banks have responded

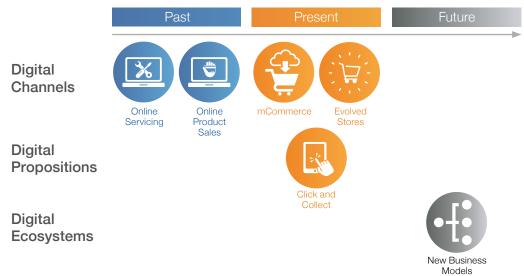
Part One

The rise of digital and how the banks have responded

The digital revolution is gathering pace across all sectors, with consumer behaviour and innovation driving a rapidly expanding market.

We have seen digital evolve from a mere channel for distributing product into the core of the proposition in its own right. The new ecosystems businesses are creating are providing further fresh opportunities.

Figure 1: Evolution of Digital Businesses



The banks have made significant strides in developing their digital offering and a wave of innovations has driven a boom in the day-to-day usage of their digital services. The growth has become explosive as internet access has been supplemented by the use of mobile devices.



To illustrate the speed of growth, Lloyds Banking Group's weekly app use has risen from 2.1 million uses in 2012 to 4.7 million in 2013 and 6.6 million in 2014. The Group's app has been downloaded more than 7.2 million times and at peak times it is being used some 138 times per second. More than £1.7 billion is transferred each week using mobile phones or tablets at the major UK banks.²

Similarly, 167,000 RBS customers use their mobile banking app between 7am and 8am on their morning commute and at the time the BBA published The Way We Bank Now in June 2014 the RBS/NatWest app had received more than 1.25 billion logins.

For the industry as a whole, we have seen the use of mobile UK banking services more than triple with monthly usage levels of 8% in 2010 jumping to 27% by 2014.³ YouGov polling carried out for the BBA in June 2014 showed that only 16% of customers never use online or mobile banking. In the same polling 32% of personal customers said they used online banking at least once a month and 56% at least once every three months. For SMEs the numbers were even greater, with 39% using online at least once a day, 69% at least once a week and 79% at least once a month. Only 7% said they never used it.

This digital offering is changing people's behaviour and enabling them to control their banking more effectively. Lloyds estimate that around 60% of mobile banking logins are simply to check balances and statements.

²Source: The Way We Bank Now – It's in your hands. BBA June 2014. ³Accenture UK Current Account Customer Surveys, 2010-14

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Banks have also enabled customers to ask for alerts to help them control their accounts better. Lloyds Bank alone sends 3.8 million text messages to its customers a week. Such messages are normally triggered by customers approaching pre-defined balance levels or to warn them that they are likely to incur charges. For HSBC, the breakdown of such alerts was 52% balance alerts, 33% balance notifications and 15% notifications that a purchase above a set amount has been made. All of this gives bank customers the opportunity to adjust their balances more effectively and reduce unwanted account charges. In our conversations with the banks this ability to empower the customer is a key driver behind the digital offering that banks are making.

Customers have been able to use mobile and internet banking to make payments at a click of a button since the launch of Faster Payments in 2008. The advent of Paym, where money can be sent by merely knowing someone's mobile phone number, is likely to see this grow still further. Barclay's Pingit app has already been downloaded more than three million times and by mid-2014 had seen £525 million transferred using that service.

It is also the case that banks are making digital payments easier through their products. Lloyds estimate that some 40% of debit card expenditure now goes online and the advent of mobile wallets is likely to increase this. Contactless payments also enable customers to pay directly from their accounts for small ticket items reducing the need to hold cash.

1.1 Digitisation of the core proposition

To present a simple and easy-to-use service to the end consumer on a digital device has required the industry to digitise the core product sets that underpin their propositions.

However, critics say that banks have only really succeeded in the digitisation of existing services. After all we could all previously make payments or check our balances, the process was simply more time consuming, involving making a phone call, visiting a branch or a cashpoint.

In this respect, significant progress has indeed been made across the industry to deliver a wide range of online services and offerings to the end consumer: Nick Williams, Consumer Digital Director at Lloyds Banking Group says: "There was some truth to the statement that the banks had merely digitised existing services, but there are new digital developments that offer customers value add propositions which they simply can't get outside a digital world (e.g. Lloyds' "It's on us" or Halifax

• Servicing products online: Most UK banks now have the ability to manage servicing requests for all their major products digitally. To achieve this, banks have extended and re-purposed online banking services, which have been in operation for over a decade, to create a "single" destination for their products and services. As of yet, not all of the functionality available online is also available on the mobile app but it is clearly the intention of banks to move as

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quickly in this direction as they can. It is the advent of smart mobile devices that has triggered the surge in the use of online banking and the banks realise that customers want to be able to do as much as their banking through their mobile device as possible.

• Acquiring products online: Most UK banks now have the ability to sell most of their existing products online. Indeed, certain product lines are already seeing the majority of purchase activity happening through digital channels.

But there is further to go.

In 2014, 45% of UK customers surveyed by Accenture who had purchased a banking product in the previous twelve months did so through the internet channel, with a further 6% claiming to have done so via a mobile device.⁴

Going forward, the banks expect this trend to accelerate, and the expectation is that, within a few short years, we will see the majority of all consumer purchases of banking products taking

Barnaby Davis, Director of Group Retail Strategy at Nationwide, said that: "More than 50% of unsecured loans are now provided online and the number continues to rise."

As Chris Popple, Managing Director Digital at RBS, highlighted in the insurance space: "The move to renewing insurance online has led to 75% of renewals now being digital within two years."

place through digital channels. The direct banks obviously lead the way already, with nearly 90% of Tesco Bank's sales currently done online, and the website

⁴Source: Accenture UK Current Account Customer Surveys, 2014

recently updated to accommodate the growing demand for touch-based mobile and tablet access from customers.

• Multi-channel integration: The industry is on a journey to join up the customer experience. Digital delivery demands the streamlining of processes and a simplification of product access and servicing. There will likely always be a need to do some services face-to-face and BBA research carried out by YouGov suggests customers value the ability to be able to do this. Banks are aware of the fact that they need to make the experience a joined-up one, where the customer does not differentiate between the digital and nondigital experience. As Grant Bourbousson, Digital and Marketing Director for Tesco Bank, told us: "We have seen rapid adoption of our mobile services. For us it's a great opportunity to understand our customers better and continually improve our services".

1.2 New banking models already emerging

In this context, digital is driving a change in customer behaviour. HSBC reported that footfall at its branches had dropped 30% since 2009, with a 10% drop between 2012 and 2013. RBS has seen a similar decline. Moreover, by the end of 2014 it is estimated that the proportion of NatWest As Chris Popple [RBS] told us: "Our objective is to link our digital and non-digital service so that there is a human being on the end of a phone or available in branch to take forward or explain any service the customer requires that they cannot fully complete online."

and RBS transactions taking place in a branch had fallen to around 10%, down from 25% in 2010. YouGov research for the BBA found that 57% of business customers thought that digital banking meant that their business had to make fewer trips to the branch.

It is also changing the use of telephone banking, with HSBC reporting call volumes down 5% in 2014 after a 4% drop in 2013. Again this is something replicated across the major banks.

Customers that do call or turn up in a branch are often seeking advice or a solution to a problem, rather than executing a payment, so banks are having to reconfigure those services. Many staff have been moved from behind the counter to meet customers and try to deal Barnaby Davies [Nationwide]: "Our new Nationwide Branch Design will have a very similar look and feel to our digital services. We want members to get a real sense of familiarity between our physical and digital locations." proactively with their enquiries. It also means those branches are having to be reconfigured to meet those new requirements. Not surprisingly, we are seeing most banks opt for fewer but better equipped branches.

Indeed, in the two decades from 1992 to 2012 the number of branches operated by the UK's retail banks shrunk by more than a quarter, falling from 13,349 in 1997 to just under 9,702 in 2013.⁵ While the closure of any branch is a sensitive issue, it makes sense for both the bank and the customer that the branch should be better able to meet the latter's requirements.

Despite the obvious attractions of a lower cost digital model based on current core banking technology, some new entrants still see a key role for the branch in their business models. They recognise the need for "anchor" stores inside the communities they serve, where the digital channel is part of an end-to-end proposition rather than the totality of the experience.

David Young, Director of Change and Innovation at Metro Bank, says: "We don't distinguish between stores or digital, we use technology to make the customer journey as simple as possible."

Of course, in contrast to the more traditional "bricks and clicks" model, we are also witnessing the emergence of new digital-only banking models that will exploit a lower cost operating model and provide online-only products and services to niche groups of customers.

⁵Source: BBA Annual Abstract of Banking Statistics

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Furthermore, a recent survey from consultants Bain & Co⁶ indicates that customers who interact with their banks through both digital and physical channels are more engaged, more loyal and more likely to hold more products with their provider.

We are also seeing the formation of more cross-industry tie ups within banking as the sector looks to better meet more of its customers' needs – both financial and non-financial. For example, LBG's "Spending Rewards" and Nationwide's "Simply Rewards" and Nationwide's are increasingly collaborating with retailers to offer customers relevant savings opportunities. How far this trend progresses will be a major factor in determining the new shape of UK banking.

As Anthony Thomson, Founder of Atom Bank and Metro Bank and current Chairman of Atom Bank, told us: "Our research shows that the most satisfied customers are self-servers who want their banking to be guick, easy and frictionless. That's why I think of Atom as being as much of a data analytics modelling business as it is a bank. The Holy Grail is to create good value products and great service. With digitisation we can do both."

⁶Source: Bain & Co (Dec 2014, <u>link</u>)

1.3 Adoption of emerging trends

The UK banking sector has made significant progress in riding the wave of innovation that digital has prompted, with a boom in the day-to-day usage of their digital services.

1.3.1 Digital banking for origination

Where the value of digital banking resides will be perceived differently across the various parts of the banking landscape. For those banks with scaled branch networks, much of the digital opportunity is around channel shift to meet consumer demand and drive efficiency. In contrast, for direct banks, digital banking offers the opportunity to drive organic growth. Nevertheless, a common feature of channel convergence will be the fact that digital sales will not be driven purely through the customer's laptop or smartphone screen. And, particularly for those with branches, the challenge right now is to mesh the different channel experiences of customers in attractive and relevant ways. The next wave of change for digital banking will be in non-digital channels, i.e. digital technologies including remote advice, or through tablet usage bringing disruption to traditional branch and telephone banking models.

Nationwide, for example, has successfully piloted and expanded video conferencing technology to connect private meeting rooms in branches with remote mortgage advisors at the firm's offices in Northampton. These secure two-way video calls have been well received by customers, who do not have to wait as long for an appointment. And, as well as better serving the customer, Nationwide achieves efficiencies, avoiding the need for an advisor in every branch. Likewise, with more in-depth financial discussions with customers now required by regulators post-MMR⁷, handling these interactions remotely helps avoid long delays and takes pressure off branch staff.⁸ For a heavily regulated product such as mortgages, the branch-to-hub model also enables greater regulatory control over a central team of advisers and offers the facility to record discussions – demonstrating how digital technologies can offer additional benefits over simple efficiency.

1.3.2 Channel convergence

The industry is on a journey to join up the different strands of customer experience. This involves the streamlining of processes and a simplification of product access and servicing. While the complexity of "safeguarding" bank customers in a digital world presents a significant challenge, new innovations on the high street are showing how the barriers currently separating channels might be removed securely to deliver a better experience for customers.

Barclays is one bank that has been thinking about how to deliver this to the market, with two recent innovations – simple ideas taken through to product testing or market launch – promising to blur the lines between channels.

In December 2014, the bank launched "Barclays Video Banking", a 24-hour service enabling premier account customers to receive face-to-face support of

⁷Source: Mortgage Market Review (MMR) ⁸Source: ThisIsMoney.co.uk (April 2014, <u>link</u>)

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the kind only previously available in branches.⁹ Taking a leaf from the Amazon playbook, the system, which will eventually be rolled out across the retail business, acknowledges the importance of face-to-face contact for specific customer moments. Higher bandwidth and stable connections help to maintain call quality, and the shift to digital delivery brings flexibility and convenience to a formerly branch-bound service. Importantly, the bank is also taking pains to provide a more personal experience where it can, by "matching" video callers with the customer services representative they dealt with previously wherever possible.

Elsewhere, the bank is trialling digital alternatives to traditional branch-based activities to drive a better experience for customers.¹⁰ Currently, 6,500 Barclays account holders are participating in a trial of a new system that removes the need for customers to visit their branch to pay in a cheque. Mobile cheque deposit – which allows the customer to pay-in a cheque by sending the bank a digital image from the camera on their smart device – has been available to

bank customers in the US, Canada and India for several years now. This is a new departure in the UK market (and is being developed by all of the major banks), and has obvious benefits for the consumers, 75% of whom (according to software provider Intelligent Environments) would prefer to deposit cheques using their smartphones.¹¹

As Josh Bottomley, HSBC's Global Head of Digital, told us: "Digital is not really about cost cutting, it is about creating a better and simpler customer experience." Leveraging digital technology to challenge the traditional limitations of channels and to deliver a better experience for customers is a shared goal across the sector.

1.3.3 Growth in digital payments and associated ecosystems

The ability for customers to send and receive payments has always been the cornerstone of the banking proposition, and the growth in digital usage is having a profound impact on payments, both within (but increasingly outside) the industry.

In comparison with other developed countries, the UK has, over recent years, become a centre for payments innovation, with an increasingly buoyant and active e-commerce market.

- More UK citizens are online than ever before 76% used the internet on a daily basis in 2014.¹² Meanwhile, 91% of the UK adults had a mobile or smartphone in 2012 (the latest available official figure)¹³, with penetration rising to 99% amongst the 16-24 age group.
- UK consumers are increasingly turning to the internet to shop the proportion of adults using the internet to make a purchase has increased from 53% in 2008 to 74% in 2014.⁷

¹²Source: Office for National Statistics (ONS) 'Digital Day' (Aug 2014, <u>link</u>)
 ¹³Source: Office for National Statistics (ONS) (Apr 2014, <u>link</u>)

⁹Source: Computer Weekly (Dec 2014, link)
 ¹⁰Source: The Telegraph (Dec 2014, link)
 ¹¹Source: Intelligent Environments (Jul 2013, link)

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• UK consumers are the biggest online shoppers in the EU – 77% of UK consumers made an internet purchase in 2012, putting the UK in joint first position with Denmark amongst EU nations.⁹

- UK e-commerce sales are growing sharply online sales reached £492 billion in 2012 (up 47% from their 2008 value of £335 billion), equal to 18% of total non-financial business turnover in 2012.⁹ In December 2014, retailer John Lewis saw Christmas sales rise by 4.8%, despite a flat trend in physical stores growth was instead driven purely by a 19% jump in online sales activity.¹⁴
- And the UK has further to grow according to management consultants the Boston Consulting Group (BCG)¹⁵ online retail will account for up to 23% of UK retail sales by 2016, up from 13.5% in 2010 and the highest proportion of any G20 economy.

Supporting such positive trends has been the success of the UK in developing one of the world's most advanced real-time payments infrastructures. The implementation of Faster Payments, for example, is helping new and innovative payments platforms like Paym and Zapp to flourish, satisfying a burgeoning appetite in the UK for online payments.

Indeed, with a recent survey by Zapp¹⁶ revealing that 44% of British consumers (i.e. 21 million bank customers) would switch to access mobile payments, and one-third (33%) threatening to do so within a year, it is easy to understand why UK banks have attached such importance to delivering digital payments.

This is also a key area of potential disintermediation for the banks, with the rise of digital wallets from Apple and Google, as well as new P2P payments solutions from the likes of PayPal and Square representing a growing threat to a key stream of traditional bank revenue.

The banks that will lead the industry through

this digital revolution will be those that offer simple, frictionless and integrated experiences. This will either require further simplification of core banking platforms to support new digital products and services, or a much greater investment in cloud-based solutions where core renewal is either too expensive or too complex to implement.

¹⁴Source: BBC News (Jan 2015, <u>link</u>)
¹⁵Source: BCG "The Internet Economy in the G20" (Mar 2012, <u>link</u>)
¹⁶Source: Zapp (Dec 2014, <u>link</u>)

As Nick Williams [LBG]

noted: "The payments

landscape is becoming

crowded and fragmented

with the main risk to banks

being the disintermediation

of customer data."

In either case, the journey will be worth the pain, as banks blend physical and digital channels to deliver a better experience (and better outcomes) to customers, through more personalised, tailored and relevant products and services.

1.4 Limited progress for business banking

In many ways, the focus of the banking industry has been on the personal customer when it comes to digital innovation. Business banking has so far received somewhat less attention. There are a number of good reasons for this, including the complexity of the products and the emphasis on banks providing a more intimate, on-going relationship with the customer.

And yet, digital disruption promises to be as transformative for this area of the market as it has been in personal banking, with innovation already starting to change the way business customers are served.

• In business finance... Amazon is reaching out to small businesses selling products through the Amazon Marketplace to offer attractive rates on working capital. Decisioning is based around the trading history Amazon holds on the vendor, as well as the quality of feedback received from customers. Amazon claims its analytics-led approach allows them to calculate the credit worthiness of customers accurately, generating a reliable revenue stream. Meanwhile, vendors receive faster access to finance than they might get from a traditional lender. Elsewhere, the rise of crowdfunding platforms such as Kickstarter

and Funding Circle gives SMEs access to new sources of capital outside the traditional banking system. Interestingly, both Santander UK¹⁷ and RBS¹⁸ have recently signed deals with Funding Circle to make their business clients aware of the alternative funding option in circumstances where this is better placed to help, or where crowdsourced lending is simply preferred. In its January 2015 announcement, RBS also revealed a tie-up with Assetz Capital, broadening its offer still further.

• In payments... specialists like iZettle and Square have been gaining ground in the peer-to-peer (P2P) and business-to-peer (B2P) payments space, with an attractive blend of digital utility, lower costs and extra functionality (e.g. the ability to email receipts to customers, and allowing them to post photos of their purchases to social media sites). In recent months, iZettle has signed up with Santander UK to provide P2P payments services to its customers. Elsewhere, firms like POS Lavu are innovating around retail point of sale, both in terms of their offering and their distribution model. New customers are recruited by local "Distros" (i.e. another SME who is licensed by the provider to install their app), with low upfront and monthly hosting fees that significantly undercut mainstream banking till solutions. In return, the client receives a single terminal, two printers, an iPod Touch or iPhone and a cash drawer. By adding an iPad to act as the till point, the store manager has a fully featured till solution, supporting chip & pin as well as contactless payments, for a fraction of the usual cost. Importantly, unlike a traditional till-point solution, the POS Lavu system also allows the store manager to access reporting through the same

iPad from anywhere with an internet connection, allowing them to check stock, sales, timesheets, and a range of other important business measures. By delivering its core functionality in an attractive and much lower cost package, with a range of value-added services built into the tool, systems like these represent a real challenge to the status quo.

- In trade finance... firms like Platform Black are growing in popularity. This type of "pay-as-you-go working capital" innovates the traditional invoice factoring model by allowing clients to auction outstanding payments to institutions and private investors. The major advantage for the customer is access, with the platform giving small businesses access to a much larger pool of potential buyers. There are of course financial benefits here too though, with Platform Black able to use its digital advantage to deliver services at very low costs, and getting cash into the client's account within ten days of the auction closing.
- In business services... a London-based firm called BCSG has recently signed a deal with Santander UK to provide a range of cloud-based solutions aimed at the bank's SME customers. The iBusinessHub helps small businesses to grow and prosper by providing access to a range of third-party, cloud-based business applications in three key categories: financial and CRM tools; credit management tools; and IT solutions. In this way the bank is able to deliver a differentiated service to its customers at low cost, while also helping to promote efficiency and resilience in its SME customer base.

In its tie-ups with disruptors like iZettle, Funding Circle, Assetz Capital and BCSG, both RBS and Santander UK provide useful examples of how banks can seize the digital opportunity. By acting as a gateway provider of third-party services to its customers, these banks provide them with certainty around the quality and security of these tools. They also deliver scale for the disrupters, as well as driving revenue and creating happier customers for themselves. What might be called a "win-win-win".

Many of the banks we spoke to said that business banking was the next target for further development of digital services. In some areas, like RBS and Santander UK, the banks will likely want to team up with alternative digital suppliers of finance. This is particularly the case where new regulatory rules make certain products less viable.

Nevertheless, the banks should be wary of digital competitors cherry-picking parts of their business and it is very much in their interest to ensure that business customers are as happy with their digital banking experience as the personal customer. The YouGov polling we quoted earlier certainly suggested that SMEs are actively using their online banking services. The challenge for the banks is to integrate as many of the traditional banking services into such an offering to enable business customers to one-stop shop. In past BBA research, the ability to source all of their banking needs from one provider was a key criterion for many businesses when it came to choosing a bank.¹⁹

¹⁹See BBA Promoting Competition in the UK Banking Industry June 2014.

Part One: The rise of digital and how the banks have responded



Case study – Lloyds

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Part Two

The challenges of the digital revolution

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Part Two

The challenges of the digital revolution

Banks are responding in various ways to the changes that digital is bringing to their industry, and the relentless pace of digital innovation means that they cannot afford to stand still. Digital disruption will continue to reshape the market over the decades to come, bringing pressures to deal with across numerous fronts:

- Changing customer behaviours will make managing the relationship more complex for banks.
- Emerging competition from technology disrupters and new entrants, with the potential to seize market share and erode the customer value-chain.
- Regulatory implications of the digitisation of banking.
- Technology-fuelled innovation will accelerate the emergence of new customer ecosystems, driving new products, services and channels to market.

2.1 Changing customer behaviour

Customers' expectations of the digital services their banks provide are continuing to rise, a trend fuelled by the experiences customers have in other sectors (e.g. "if my mobile provider/online retailer/utility can provide a specific type of service in a particular way, why can't my bank?"). Specifically:

• The propensity of UK consumers to buy products and services online is increasing, and banks' digital services must be as seamless and frictionless as possible. However, research shows that banks still have some way to go to deliver the experiences that customers are looking for. As Figure 2 below shows, while the majority of UK bank customers surveyed by Accenture in 2014 found their experience "easy" (70%) and "effective" (63%), fewer than half found them "enjoyable" (47%). Much of the challenge for banks then is how to create the warmth and engagement of a face-to-face exchange though a remote channel, moving digital beyond a simple driver of transactional behaviour.

²⁰Source: Accenture UK Current Account Customer Survey, 2014

- Through the analysis of customer data, digital is increasingly allowing service providers of all stripes to deliver more personalised services to their customers. When selecting a current account provider, customers surveyed by Accenture²¹ last year increasingly rated the availability of personalised services as a key deciding factor.
- Consumers have a growing appetite for simple, easy-to-use, friction free payments that are consistently supported across channels. They have already embraced the newly reinvented, streamlined and seamless digital experiences provided by technology players like Apple, Amazon, Facebook, Google and PayPal, and they expect similar experiences from the payment services offered by their banks.
- A lack of trust in institutions has seen UK consumers demand greater transparency and clarity around the services and products they buy.

This requirement to provide more information more easily will continue to intensify, with greater interest in clear fees and charges and the provision of personal financial management tools to help customers make better decisions. As Chris Popple [RBS] says: "Digital has given customers a window into the factory. The aim of RBS is to become 'radically transparent' to meet a corporate objective of becoming the UK's most trusted bank." The banks appear to be well placed to deliver on this. Accenture surveyed 2,870 UK life insurance customers last year,²² who reported banks to be more trustworthy than insurance, technology and telecoms companies.

²²Source: Accenture UK Life Insurance Customer Survey, 2014

²³Source: Accenture UK Current Account Customer Survey, 2014

As Nick Williams [LBG] says: "The banks are still seen as the most trusted organisations to manage peoples' money."

 Digital has also given new non-bank brands the opportunity to engage in financial services provision. And, despite not providing a full range of core banking services, they are succeeding in blurring perceptions. For example, 1-in-5 (21%) of the UK Bank customers surveyed by Accenture would consider banking with PayPal if it offered a current account.²³



2.2 Emerging competitors and new entrants

The rapidly growing customer appetite for digital banking has made it easier in some respects to enter the banking marketplace, with lower barriers to entry attracting a record 29 firms to apply for banking licenses from the UK financial regulator, the Prudential Regulatory Authority (PRA) in 2014.²⁴ A fresh injection of competition such as this will undoubtedly bring new ideas to the market. This is in stark comparison with 2010 when Metro Bank was the first new bank to obtain a license since the 19th Century.

Josh Bottomley [HSBC] says: "Google and Amazon are not likely to enter the current account market because it is complex operationally and economically. Competitors will try to cherry-pick profitable lines and disaggregate the value chain where they can achieve scale (e.g. in foreign exchange, peer-to-peer lending and payments)."

This is a challenge to which the incumbents must respond.

As mentioned earlier in this paper, there is a growing threat to existing players from new entrants in the lending and payments space, who are able to disrupt the value-chain and effectively disaggregate banks from key services.

We already see some new entrants venturing into payments and lending, which is precisely the "playing in the margins" the industry will need to monitor.

2.2.1 Payments

In recent years there has been an abundance of new non-bank competition entering the payments market. A potential battleground in the UK market, banks will attempt to defend and grow their foothold in online commerce whilst at the same time leveraging the opportunity to convert in-store cash transactions to electronic equivalents.

Historically, banks have relied heavily on capturing retail commerce transactions through cards, which remain the most popular method for UK consumers when paying for goods and services online (87%), followed by pre-paid cards or accounts such as those provided by PayPal (40%) and electronic bank transfers (7%).²⁵ However, alternative payment methods such as digital wallets are gaining traction, and over time could present a significant threat to bank revenues as transactions cease to be card-based. Ultimately, alternative non-bank payments providers have the potential to disintermediate banks, seizing the customer relationship and the transactional data. The response from the banks has to be one which ensures they benefit from the advent of digital wallets. For example, one of the key attractions of PayPal for many consumers is the ease of payment, with a username and password as opposed to having to enter all their bank card details. Digital wallets have the potential to enable consumers to use their bank cards in the same way as they currently use PayPal. The question for the banks is whether to develop their own bespoke wallets or to team up with others.

In the meantime alternative providers, like PayPal and Google, are increasing their efforts to expand their market share of in-store payments, and have already launched mobile payments propositions globally. Retailers are also launching their own proprietary innovations, such as CurrentC by Merchant Customer Exchange (MCX) in the US. In the UK, Tesco has recently trialled QR code based mobile payments ("PayQwiq")²⁶, with mobile payments presenting additional opportunities for retailers to integrate loyalty and analytics. As Chris Popple [RBS] told us: "We are not expecting an Apple Bank because banking is less trading focused than most retail, [while] the mix of ecosystem and government perpetuates the current model. However, over the next 5-10 years we expect to see changes at the margins, but these will accumulate such that, if not continuously pursued, RBS could be left behind. [We need] little pushes of the Titanic to avoid the iceberg".

Banks in other countries have developed more proactive and coordinated responses to develop and launch bank account-driven (as opposed to card-driven) digital wallets. One such example is iDEAL from the Netherlands, which is similar to Zapp's UK proposition and has been hugely successful, achieving 74% approval and 58% market share of Dutch e-commerce payments by 2012. This dwarfs the share of credit card payments (7%) and PayPal (4%).²⁷

²⁵Source: Office for National Statistics (ONS) 'Digital Day' (Aug 2014, <u>link</u>)

²⁶Source: PayQwiq Website, <u>link</u>)
 ²⁷Source: Equens "Shopping 2020 – How do the Dutch Pay in 2013" (Sep 2013, <u>link</u>)

2.2.2. Lending

Digital is also changing the way that customers access credit. This is evidenced by the rapid growth of short-term, unsecured lending driven by online providers that charge high rates for fast access to cash. At its peak, this so-called "payday lending" market was worth £2 billion. Regulators have since acted to rein in the excesses of a sector that, at its worst, made bad loans with eye-watering APRs to customers who could never hope to pay them back. And yet, despite the abuses of certain players in the market, customers who did successfully borrow and pay back such loans were by-and-large highly satisfied and keen to borrow again.

In this digital age some consumers are attracted to a low friction lending solution that offered them rapid access to credit through a simple interface, with transparent products and pricing that could be personalised to their particular needs. This is a far cry from the more homogeneous, lengthy and inflexible lending processes offered by some conventional lenders.

Indeed, there are many advantages to the low friction model that banks may wish to emulate to better meet the needs of their customers.

• **Convenience** – a digital lender does not require the customer to visit a branch to secure funds, and mobile apps are available on-the-go, granting access to credit at the point of need. Integrating such a tool into the mobile banking solution would add a valuable new dimension, permitting the borrower to see their finances "in the round", promoting more responsible borrowing.



• Simplicity & transparency – to keep the lending process as streamlined as possible, the number of questions and information requests from applicants is generally kept to a minimum. In the past, this at times led to inappropriate lending to unsuitable borrowers. However, a credit process that utilises more advanced analytics techniques could deliver better, faster, and less labour-intensive decisioning. While the customer may only be prompted to select the value and maturity of the loan they want, complex algorithms running behind the scenes pre-populate the bank's decisioning engine with a much wider range of data inputs to deliver better outcomes (i.e. the right sum on the right terms for borrower and lender). And clear, plain language guidance around the terms and real cost of the sums being borrowed are vital.

• Flexibility & personalisation – customers can already determine how much they want to borrow and when they want to pay back. However, as responsible lenders, banks could also build repayment facilities into their apps and use loyalty systems to reward responsible credit behaviours (e.g. paying above the minimum balance every month, meeting all repayment milestones, etc.). Similarly, customers could be incentivised to build up their track record, attracting better rates, preferential terms, and other boons for proving themselves to be responsible borrowers.

Clearly, for such an approach to work in a mainstream banking context, a tricky set of balances must be struck. Rates may indeed be higher for such services, reflecting the added convenience (and attendant risk) of such a system. However, rates will be scrutinised closely, so efforts must be made to tailor them to the individual in a fair and transparent way.

Likewise, banks will wish to protect their customers from making rash credit decisions. A little friction in this context could provide welcome protection (e.g. allow funds to be drawn-down up to a pre-approved limit in one 24-hour period), and present a golden opportunity to interact with the customer to find a preferred approach. Backed up with 24x7 IM and voice contact centres, such "credit rules" might be varied, creating a more tailored solution for the customer.

In this way, through the use of the latest advances in data analytics and digital delivery, banks might balance security with convenience, drive positive conversations with their customers, and delight them with a safe, tailored and relevant digital lending solution. It also provides an opportunity for banks to use digital processes to ensure both that the customer understands the product they are using and also that the application process generates a digital paper trail. This would enable them to avoid a repeat of historic issues like PPI.

Such ideas are not new, and the banks must be alive to the fact that new competitors and disrupters are thinking in these terms. By accelerating the pace of change, innovating more bravely and rapidly, and bringing new propositions to market, they will be well placed to respond. However, this will only happen in the context of the risk appetite of the banks, supported with better and smarter (i.e. more data-led) decision making.

2.3 Regulatory implications of the digitisation of banking

At the BBA/Accenture digital conference in November 2014 Peter Sands, CEO of Standard Chartered Bank, made the analogy of the banking industry pre the digital age being like medieval knights in a castle protected by a moat, with that moat being regulation. The digital revolution is akin to cannons arriving and removing the protection of the moat. In essence he was arguing that the digital revolution would allow non-bank digital providers to offer bank-type services without becoming banks.

We are seeing this to a certain extent already with Google Wallet, Apple Pay, payment via Twitter, Moneywise, Amazon Lending and so on. As yet none of these has become a mould breaker in the way that cannons were but we have seen enough in other industries for it to be a real enough threat to banking. Peter Sands is not alone though in his concern. Jamie Dimon, CEO of JP Morgan said in February of last year "[The technology companies] all want to eat our lunch... I mean every single one of them, and they're going to try."²⁸

Interestingly the threat does not just come from the global internet players but also from start-ups. Also at the BBA/Accenture conference was a challenger panel made up of digital banks or near banks. All argued that they did not want to replicate the all-encompassing service offered by the major banks but instead wanted to target certain customer segments that they felt the major banks were not servicing as well as they could. In other words they want to cherry-pick the bits of the current banks that they found most attractive. Most of these were targeting personal bank customers but it has already happened to some extent in business banking. Aldermore and Shawbrook are internet rather than branch-based, and have targeted specific areas of corporate bank lending where they feel major banks have withdrawn from the market. They do not seek to offer a full blown banking service and believe they can be more flexible and responsive as a result.

Peer to Peer lending, supply chain financing, invoice discounting have all flourished online and again have offered alternatives to bank finance.

In many ways regulators are likely to welcome the new competition for the banking industry and as we highlighted in Part One some UK banks have tried to integrate these alternative providers into their own offering to their customers.

There is one common theme though to the competition we discuss above. Each and every one of them is trying to target a specific section of the major banks' business. There is a risk that, in Jamie Dimon's phrase, if they do succeed in eating the banks' lunch and start to undermine profitability at the banks, that in turn might affect the banks' ability to build and maintain the capital that the regulators are so keen on them having in order to avoid a repeat of the financial crisis.

Indeed, it is not unreasonable to argue that the banks are encumbered by a raft of regulation that non-banks can avoid – be it capital ratios, funding requirements, liquidity, anti-money laundering regulations etc. To extend the

²⁸Source: Financial Times, 23rd September 2014, Banks face competition from start ups.

Peter Sands' analogy, medieval knights gave up their bulky armour when they realised it no longer gave them protection against bullets, preferring the flexibility accorded by lighter clothing. For banks regulation could well represent the armour making it difficult for them to respond to the more agile digital non-bank competitors.

Another area of where the digitising of banking services could have an impact is on payments. We all remember the queues outside Northern Rock as people sought to withdraw their money. That was before the arrival of Faster Payments and digital apps. Now it is possible for people to move significant sums at the touch of a button. There is nothing to stop someone from setting up or having another account and moving their funds over in a matter of minutes.

A number of senior bankers we spoke to highlight the fact that this had made the deposit base significantly less secure.

Some also said that they had been forced to make a deliberate decision to not compete for certain large corporate deposits because of the impact it had on their funding ratios. Clearly the hope of regulators is that, by making banks safer, people will not want to move money away from the mainstream banks, and customers will feel that their money is secure there. Other parties, with lower cost bases however, may be able to offer better returns and attract business that way.

As yet there does not appear to be a critical app that will cause people to move their money away from banking as it has encouraged people to shift their business in other industries. Yet the concern is still there.

Digitisation therefore raises a number of key issues for regulators. Regulation is fundamentally aimed at reducing prudential risk and misconduct. In the main,

that is done by regulating institutions, such as those that hold banking licences. As in other sectors, there is always a danger that misconduct or risk is squeezed out of the regulated sector into the unregulated sector, hence the regulatory concern about shadow banking. That ever-present risk is massively amplified by the challenge of digitisation to the business models of banks, by giving greater opportunities to non-banks to do bank-type activities.

seems willing to wait and watch for the 'Uber' tipping point. We need to be much more ambitious and demanding of technology and innovation to make banking much easier and much more transparent. We might not be able to predict the 'when' but the 'what' is a customer no longer feeling the need to pay their salary into a traditional current account because there is another destination that provides a greater value exchange and at least the same level of security and certainty."

As Barnaby Davis [Nationwide]

put it: "The banking industry

Digital Disruption: UK Banking Report

A good example is so-called payday lenders, which have existed since time immemorial. Banking regulation, which restricts banks from lending to borrowers who cannot sustainably repay the debt, does not subject payday lenders to such rules. While they had an essentially manual business model, their activities were limited in scale. However, digitisation, using the internet as well as big data, enabled payday lenders like Wonga to expand exponentially, unconstrained by bank regulation on lending practices. Many of the payday lenders were essentially internet firms offering bank-like services. The subsequent explosion of payday lending led to a massive political outcry. The government then brought them under the regulation of the Financial Conduct Authority, whose conduct rules subsequently put almost all payday lenders out of business. The payday lender episode shows how digitisation can so greatly amplify regulatory arbitrage, that it requires a rewrite of regulation. At a more fundamental level, it shows the risks inherent in having regulation based solely on institutions, such as banks, rather than on activities, such as lending.

Other areas where digitisation could impact regulation include:

 Virtual currencies are not subject to the same financial crime regulation as banks, in particular the need to know their customer. This regulation is there for good reason, to tackle money laundering, terrorist financing and sanctions.
 While virtual currencies have undoubted attractions, users should not be able to make payments without being tracked by law enforcement authorities. It would seriously hamper the fight against crime if virtual currencies flourished, simply because they had weaker financial crime regulation than banks.

- Customers are used to agreeing to terms and conditions online and on mobile phones to access digital products. Financial service products though are completely different to signing up to iTunes, Gmail or Amazon's services. Banks are already looking at how they can track the amount of time customers spend looking at terms and conditions and the responses they give to ensure they understand the products they are signing up for. Regulators need to work with the banks to ensure that the right balance is struck between speed, efficiency and customers' knowledge of the products they are purchasing.
- Payment and money flight risk. The issues discussed above caused by the ability to move money so much more quickly through methods like Faster Payments is a clear prudential risk. Payments systems are regulated to ensure stability and liquidity, so if payments can be moved so rapidly that they could potentially undermine financial institutions then regulators need to consider this in their framework.

There are additional risks from non- banks supplying credit to companies and individuals. Banks are forced to model and risk weight their loans. Yet non-bank institutions such as Amazon – which provides trade finance - are not. Can we be sure that such lenders will not come unstuck in the next credit downturn? Peer-to-peer lending is also something that is growing rapidly, but do all the investors in this really understand the risks they are taking? Again is there a danger of credit risk leaking out of the banking system to where it is less closely regulated. As we saw with subprime, just because something looks like it has been disintermediated it does not always mean the risk has been reduced.

The regulators are going to be as challenged by the digital revolution as much as the banks. The challenge for regulators is ensuring that they do not damage consumer protection, the fight against crime, and financial stability by squeezing misconduct or prudential risk out of the regulated banking sector into the nonregulated digital sector. They also have to do that while not hampering either innovation or competition. We know from our conversations with them that this is something they are aware of and are trying to respond to. In essence, they will need to focus on regulating activities, rather than just focussing on regulating types of institution. It is vital that they get the balance right. They must ensure that the banks can respond to the new competition, and that regulation itself does not create incentives for the provision of financial services moving to more lightly regulated sectors, with all the potential dangers that brings.

2.4 Hard-wired complexity

From an internal operations perspective, the new elephant in the room is how to accommodate digital at the core of the bank – quite literally. A digital world presents a range of new demands on banks' infrastructure, including:

- Delivering the slick back office systems to support a 24/7 world
- Supporting technology when those who know it best are retiring or retired
- Supporting new apps and disruptors that seek access to their users' banking data (with intensifying pressure from customers to comply)
- Managing the cost pressures of delivering simplification

• Satisfying regulators who are increasingly intolerant of on-going bank systems' fragility.

Through continuous improvement programmes and more flexible infrastructure, some banks have demonstrated that, while daunting, core replacement is far from impossible.

However, for many, the risks of tinkering with the core are greatly magnified by the legacy of complexity hard-wired into their systems.

Lots of functions that currently reside in the core platform do not really need to be there. These would include functions such as the general ledger, the bank's product factory and business rules. Indeed, in the case of the latter, rules that would be better housed in a discrete 'rules engine' are more often scattered about in lines of code. This has interesting consequences for areas like payments, where complex webs of rules manage the delicate balance and synchronisation required for operating a real time current account. Similarly, document production presents its own risks, particularly where systems may churn out duplicate correspondence in the event of an event such as bereavement, which may be upsetting for the customer and embarrassing for the bank.

Such complexity is the result of an accumulation within banks of thousands of minor software patches and variations, sometimes over decades. Systems have evolved, but not by design, and the outcome for banks has been the creation of enormous and intractable complexity.

2.4.1 Complexity causes problems

Core complexity presents a number of challenges for the banks:

- Reduces agility the rate at which decisions can be made is slowed by complexity, with creaking IT struggling to keep pace with the changing demands of the business.
- Reduces security it is much harder to protect complex systems, and at a time of rising concerns over cyber-security banks must ensure their core IT is fit for purpose.
- Increases risk more cogs in the system means more opportunity for things to go wrong. The net effect of complexity is to reduce overall resilience (as demonstrated in recent systems crashes at some of the UK's largest banks).
- Increases cost every time you want to do something new or innovative, you need to break something else to make it work.
- **Damages trust** customers in the digital world will be increasingly unwilling to tolerate systems outages that prevent them accessing their data (not to mention their cash).

2.4.2 But complexity is not the only problem posed by legacy systems

• Complexity slows down innovation, but around this is the deeper problem of branch accounting. Payment decisions made overnight through batch processes feature hundreds of thousands of individual steps (this was the key issue in the case of the 2012 RBS outage).

- Batch processing also does not yet fully support 24/7 or mobile payments. On Amazon customers get the full front/middle/back office interactions (e.g. "we have your order", followed by "we're preparing your order", followed by "your order is on its way"). In batch, that is all rolled together, potentially leaving the customer having to wait. For example, digital cheque processing has reduced the time-to-clear for cheques from six days to two days, but the reason it still takes two days is because of the batch issue.
- Balances do not update in real-time efficiently, with enormous strain placed on systems by the increasing transactionality of digital customers, who may be checking their balance five, ten or twenty times a day, compared to once or twice.

2.4.3 Solving the problem of legacy complexity

In solving this issue, banks have a number of possible approaches:

- **Do nothing?** This is unlikely to work, since consumers will abandon banks that can't keep up with the way they want to manage their finances.
- Select a new core banking platform? Multi-year programmes see the bank's best IT brains focused away from innovation for long periods of time. Re-platforming can be done, but it is difficult to do cheaply and quickly, and carries risk.

- Pretend you are being taken over by another bank? Undertake a simulation exercise and think about what an acquirer would do to your core system? Then search for workable solutions.
- Acquisition? Find a small bank you can afford to acquire with the IT you would like to have, buy them and reverse into their already working, scalable systems. There are not too many around, but their numbers are growing as the ranks of challengers grow.
- A lifeboat? Build a ring-fenced "bank within a bank", and migrate across quickly. The incremental cost of the long migration tail will escalate quickly, so a rapid transition is critical.

It is understandable where the complexity and cost implications are so high that there is reluctance from the established banks to consider such large scale transformation. However, the pressure to broach the infrastructure conundrum is not only coming from new entrants and smaller, more agile players. Regulators are increasingly likely to want to see significant efforts from the banks to move in line with digital disruption, not As John Maskery, Managing Director at Accenture, told us: "Banks simply have no option but to simplify the complexity of their legacy systems. This will be driven by business demands with some banks needing a two-speed IT system that blends fast and agile digital delivery with their traditional "complex waterfall" core platforms. The banks that grasp the nettle will gain significant customer and digital advantages."



only to protect the interests of bank customers, but also to ensure the banks themselves continue to be successful.

Changes to accommodate digital disruption are not restricted to the banks. The regulator also needs to modernise regulation, policies and procedures to make sure that it remains relevant to the implications of digital in the banking sector.

Case study - Innovate Finance

The future of fintech in the UK

Innovate Finance are focused on ensuring the UK establishes itself as the centre of global fintech investment by building on the geography's success across financial services.

The adoption of fintech solutions is empowering consumers to play an active role in lending and borrowing through peer-to-peer networks, helping consumers manage their own finances, and freeing up surplus capital to invest in small businesses. Its adoption presents an opportunity to radically democratise financial services and boost economic growth.

As well as bringing the acknowledged benefits of greater competition to our financial system, by broadening the range of players beyond the largest banks, the rise of these new models and businesses has the potential to increase the resilience of the economy. This should be of benefit to and welcomed by, the whole industry.

The growth of alternative finance in the UK is now starting to make a real impact in the economy. NESTA research shows the UK alternative finance market was estimated to be worth £1.74 billion in 2014, an increase of 161% on the previous year, and is projected to grow to around £4.4 billion in 2015.



Unsurprisingly, such encouraging figures and potential have attracted a growing number of international and US investors. The remittance firm, WorldRemit has recently raised \$100m from Silicon Valley investors valuing the company at \$500 million, with TransferWise raising an additional \$58 million and being valued at \$1 billion.

The success of alternative finance have not gone unnoticed by the traditional banking sector, many of which have joined Innovate Finance and are starting to engage with these new providers. The recent partnership between Santander and RBS with Funding Circle allows the latter to market its services via the banks and both to grow their customer base in a mutually beneficial relationship.

The growth and adoption of fintech is not confined to disruptive alternative finance. It is increasingly being utilised to improve the security of existing legacy and networked systems. With an estimated \$1 billion stolen from 100 banks in 30 countries in an "unprecedented cyber robbery" over the past two years, the need for increased investment in cyber security will grow.

In response to this growing threat, Digital Shadows, the fintech cyber security experts, has grown from two people to over 30 and is now launching in the US, having raised £5.2 million from Passion Capital in its latest funding round.

With investment in UK fintech continuing to grow, the biggest risk to established financial services providers is inaction, of not taking the opportunities provided by fintech.

Disintermediation of financial services will continue transforming the consumer experience and business models. This will require a paradigm shift in established policy approaches if the UK is to maintain its global competitive advantage in financial services.

This report demonstrates the growing importance of the sector and should be welcomed by consumers, policymakers and industry players alike.

Clare Cockerton, CEO, Innovate Finance



Part Three

The opportunity from digitisation

Part Three

The opportunity from digitisation

Digital transformation programmes have been running across the banking sector for several years, in part fuelled by the drive to cut costs and automate activity. It is clear that the migration of customers to self-service channels has continued at pace with around 80% of the UK banking population now using some form of online banking service every month.²⁹ As Chris Popple [RBS] says: "It is a myth that the take up of digital drives costs down, it is the externalities of digital that achieve this; digital forces banks to make their processes simpler, reduce the number of rules associated with products and have less exceptions – all drive costs down."

The industry is investing billions in digitising their core operations, yet significant work will continue to be required to get the value out of the digital propositions.

As banks seek to rebuild profitability after the financial crisis there will be further pressures for digital banking programmes to respond to.

3.1 Monetising digital

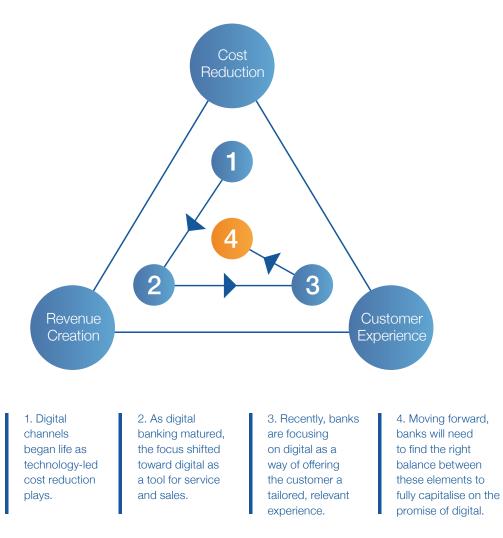
The focus for the industry has hitherto been on using digital as a mechanism to simplify and hence reduce the cost of service. However, the role of direct, increasingly digital channels continues to evolve, as the industry shifts focus from cost reduction into data-led sales activity, and latterly to a differentiated experience.

²⁹Source: Accenture UK Current Account Customer Survey, 2014

Moving forward, banks must find the right blend of efficiency saving, revenue generation potential and the opportunity to be closely and continuously engaged in their customers' lives offered by attractive, relevant and tailored digital experiences. As Grant Bourbousson [Tesco] told us: "We don't think about digital as a channel. Digital is simply an enabler to create a great customer experience. The early indications are that digital is boosting sales because it is leading to greater customer engagement."

Josh Bottomley [HSBC] told us: "Cross-selling and service messages are difficult to tell apart. For example, Groupon would think of their 'offers' as part of their 'service'. Competition between banks will improve the relevance of communication over time. It's also about getting the balance right between branches/human support and algorithmic methods."

Figure 4: The Evolution of Digital Channels



3.2 Channel evolution

The continual drive to digitisation will see the ways banks serve their customers evolve:

3.2.1 Branches

Branch-based transactions will likely fall further, intensifying the pressure on banks to evolve their existing branch formats and propositions. However, the branch will remain a key part of the customer service equation, presaging the emergence of new formats. These will be typified by fewer physical locations, and increasing efforts made to make more of the opportunity presented by customers' branch "visits".

The hub-and-spoke model is one way that banks will adapt to the digital revolution. Just as the UK's largest supermarket chains operate a mix of superstores and smaller local outlets to handle the day-to-day convenience needs of their customers, so banks may move to lighter models that reflect the needs of their customers. A smaller number of fully-featured "hub" branches, configured to deliver face-to-face support and advice where needed, will be supplemented by networks of local access "spokes" that deliver convenience services like cash acquisition and deposits, utilising smart ATMs and video conferencing to provide human interaction where needed. Longer opening hours (perhaps 24/7) and easier local access will make these a convenient choice for customers looking to undertake a broad range of transactional activity.



3.2.2. Call centres

Telephone banking is evolving as the roles of traditional call centre staff expand to encompass a broader range of services delivered through voice, IM, and video chat. In time, the complexity of requests from digital customers will likely rise, as surging use of virtual contact channels supplements the decline of physical branch transactions. This will demand investment from the banks in tools, training and more specialised staff to deliver a fuller spectrum of direct customer services.

3.2.3 Online and mobile

As the flexibility and functionality of mobile banking, delivered through smartphones and tablets, continues to broaden and deepen, so the trend of channel shift will accelerate. Mobile will increasingly cannibalise the channel share of more traditional online banking activity, particularly as younger customers leapfrog the laptop and jump straight into a banking experience revolving around touch-devices, direct contact centre support and recourse to branch as needed. Banks must begin the process of rebalancing their investment in digital platforms now, removing friction between their digital channels to deliver the seamless experiences demanded by the "Amazon generation".

3.3 Product change

The rise of digital, and increasingly mobile, as the primary channels of sale creates the need to ensure that the product range banks are offering is suited to the new banking landscape. Product teams have to be increasingly conscious of this and deliver features that can be easily understood and As Grant Bourbousson [Tesco] told us "The move to customer-focused design has been easier for us because as an organisation we always think of the customer first."

navigated on a four-inch screen. Similarly, there is also perhaps a requirement here to respond to wider trends in the retail consumer market. The phenomena of "offer fatigue" is thought to be a growing problem for customers, with the dizzying array of offers and deals available from different outlets leaving shoppers uncertain of which deals are best for them. Banks can learn from this experience. The retail financial products offered by banks to their customers should be clean, simple and transparent as the channels through which they are sold and serviced.

In this context, the key challenge for the banks will be to generate the culture of entrepreneurship required to deliver change at scale, whilst continuing to manage the formal disciplines of risk and return on investment that investors demand. This is an approach that must start at the core.

3.4 Technology-driven innovation

Banks should not merely look to other new banking entrants for disruptive forces, but also to new disruptive technologies and device providers. The rapid and continual rise of mobile banking is not solely due to activity led by the banks, but rather to the impact of technology firms who have put smart devices within easy reach of mainstream banking customers.

In the same way that camera-phones have enabled cheque imaging, the features pipeline for device providers will help enable the next wave of mobile banking innovation (e.g. biometrics, wearables, augmented reality).

Some of the more interesting developments we see include:

3.4.1 Biometrics

In the wake of damaging and well-publicised cyber-attacks on public and private institutions, cyber-security and authentication has emerged as the key challenge facing digital enterprise in 2015. This is particularly true in financial services, with security fears representing the biggest barrier to mobile banking adoption for UK consumers.³⁰

• In January 2015, Apple filed a patent³¹ with the US authorities for a way to add Touch ID to its Apple Pay offering. This is a clear statement of intent to bring biometric authorisation to its popular payments platform.

- Digital start-ups are innovating too, bringing a range of attractive and lowfriction ideas to market to address the challenge of digital security. For example, "Is It You"³² claims to authenticate users through the process of taking a "selfie", comparing the image taken with a stored scan of the device owners' face.
- Elsewhere, PixelPin³³ is an example of a UK start-up looking to remove the need for passwords by allowing users to authenticate themselves by tapping four secret points on a personal picture selected by the user.

Addressing the challenges of digital security for consumers will contribute immensely to the uptake of new technologies. Biometrics represents a new front in this battle.

3.4.2 Big data

Behind the scenes, big data³⁴ is helping to drive a revolution in the way banks and other institutions serve, manage and reach their customers. By manipulating the vast clouds of data that surround their customers, As Anthony Thomson [Atom] told us: "We are building technology so that we can use customers' data to allow us to offer dynamic and predictive monthly statements – not ones that just showed last month's outgoings. This way we can show the customer what they are likely to spend next month and potentially tailor savings and credit products to match their upcoming needs. Our vision is to become the first 'telepathic bank'."

 ³⁰Source: Accenture UK Current Account Customer Survey, 2014 (Note: almost half (47%) of those customers who did not use mobile banking services in 2014 cited security as the key factor holding them back from adoption).
 ³¹Source: Tech Crunch (Jan 2015, <u>link</u>)
 ³²Source: Is It You, <u>link</u>

³³Source: PixelPin, link

³⁴Source: Gartner defines "big data" as "...high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of information-processing for enhanced insight and decision making", <u>link</u>

Part Three: The opportunity from digitisation

banks have the potential to deliver a better service to customers – chiefly by making better and smarter use of the data they already hold internally on those individuals. This includes making better credit decisions, targeting products and services more effectively, and even responding to the needs of their customers before their customers are even aware of them (e.g. by tracking life stages, spotting events such as the birth of a child in the data running through the customer's account, and offering tailored long-term savings products).

Elsewhere, big data is helping to drive a range of new and engaging services for customers. In Australia for example, UBank³⁵ has fed more than a billion anonymised customer datapoints into an analytics engine that provides customers with a way of comparing their spending habits with those of other Australians, down to zip (post) code level. Its PeopleLikeU³⁶ service can be used in various ways that showcase the power of data to deliver better, more relevant experiences for customers.

For example, the system will tell you where the hotspots are (i.e. where other UBank customers are spending their money) in different cities, and allow you to compare spending trends by shopping category, spending on essential vs. Iuxury items, as well as entertainment preferences. Importantly, you can also compare your bills with those of the average UBank customer, giving you a good sense of whether you are over- or under-paying for certain services, such as mobile telephone contracts or utilities.

³⁵Source: UBank, a fully owned subsidiary of National Australia Bank (NAB, link)
 ³⁶Source: PeopleLikeU, link)
 ³⁷Source: Lloyds Bank offers a service called MoneyManager (link)

In all cases, by playing back aggregated data to their customers, the bank is helping them to potentially make better informed choices about the products they buy, and by extension could help optimise their finances – a valuable boon in these financially strained times. Banks such as Lloyds already employ personal financial management tools³⁷ and, in the future, linking transactional

data held by the bank to richer data sources (e.g. from retail loyalty cards) will greatly extend the flexibility and value of such offerings.



As people spend an increasing amount of time on their digital lives, there is a danger that money hasn't kept up with the way people want to spend it. Digital credit such as mobile money (e.g. PayPal) and in-game value stores (e.g. Xbox Marketplace or Nintendo Store credit) have been with us for several years now. The former are denominated in recognisable national currencies, while the latter function as a means of exchange within discrete network platforms. However, the first mainstream crypto-currency³⁸ was bitcoin, launched in 2009 and recently the subject of investigations by the US and UK financial regulators. What makes bitcoin and other crypto-currencies different is that they can be readily translated into regular currency and used to make regular transactions, despite not being issued by a central bank nor being subject to central monetary authority. Concerns over bitcoin as a haven for illegal payments activity endure, as do fears over the volatility of a currency that has shed nearly 75% of its value in the last year. However, as The Economist recently noted, "bitcoins have three useful qualities in a currency: they are hard to earn, limited in supply and easy to verify".³⁹ Indeed, crypto-currencies increasingly look like becoming ubiquitous challengers to more familiar, established currencies. And, as they grow in popularity, so too will the risks for banks.

In his 2013 testimony to a US Senate Committee hearing on digital payments,⁴⁰ Anthony Gallippi, co-founder and CEO of BitPay, a bitcoin payment processing company, told senators that bitcoin "...will certainly disrupt existing financial services and their fee structures".

With only an estimated nearly \$4 billion bitcoins currently in circulation, the dream may be some way from becoming reality. And yet, the risks should not be ignored. Bitcoin users can handle many of their daily payments needs themselves, without the need for interaction with banks, and avoiding the need to incur bank fees. In the same way, value stored in PayPal accounts moves outside of the bank's payment systems, depriving banks of valuable payments revenue.

As digital and crypto-currencies gain traction, the threat to bank's free-income streams will grow. So, as BNP Paribas research analyst Johann Palychata suggested in a recent note to investors, banks must invest time and energy in understanding how best to use the technology behind schemes like bitcoin "...before other players step in to make that decision for them".⁴¹

There are also risks as regulators know all too well that currencies that operate outside the banking system also have the potential to be a refuge for those who want to hide their identity or payments for illegitimate reasons.

³⁸Source: The Bank of England (Sep 2014, <u>link</u>).
 ³⁹Source: The Economist (Jan 2015, <u>link</u>)
 ⁴⁰Source: BankRate (Nov 2013, <u>link</u>)

⁴¹Source: Finextra (Nov 2014, <u>link</u>)



3.4.4 The Internet of me

Wearable technology, from Google Glass to health trackers such as the Jawbone, Fitbit and Vivosmart, are bringing a range of new experiences to customers. As online technology journal PSFK reported⁴² last year "you can put on a T-shirt to feel the same physical sensations as a rugby player on the field, create a social timeline of your dog's daily activity, [and] turn your heartbeat into a wall clock". However, wearables are not just about gimmicks, and this new branch of mass market technology presents an exciting new frontier for financial services providers, opening new windows into customer data, facilitating fast, convenient payments and driving innovative reward schemes.

In 2015, Apple is set to join Google in offering customers a smart watch, and the expectation is that this will do for wearables what the iPod did for digital music. And, as the global wearables market targets ubiquity, banks are beginning to grasp the opportunities they present to excite and delight their customers.

• In payments: Barclaycard leads the way with its range of bPay wristbands, planning a full-scale rollout later this year. The device links to the wearer's credit or debit card, allowing them to make low-value payments through the tap of a wrist at over 300,000 contactless payment points around the UK. Barclays is also reportedly looking to extend the functionality of their devices⁴³, allowing customers to perform quick social media check-ins, enter competitions and benefit from a range of loyalty activities at selected leisure and sports venues. In return, valuable data is captured about the customer. Barclays benefits from a deeper understanding of their purchase preferences and behaviours, while the venue benefits from enhanced revenue generation, as customers use their new payments method to purchase merchandise, corporate facilities and hospitality.

• In banking: Nationwide recently

As their COO Tony Prestedge told The Guardian⁴⁵ in November 2014: "Providing customers with a variety of ways to manage their money, whenever and however they want is a priority for us. Giving those members who want and have the technology the ability to check their balance on their watch provides them with even more choice as to how they interact with us."

unveiled wearable support for customers seeking account data. As its YouTube video⁴⁴ demonstrates, Google smartwatch users can use voice commands to access account balances on the move. The system is synced with the customers' mobile device and configured through Nationwide's mobile banking app, allowing the customer the freedom to schedule morning updates with real-time account balances, as well as make payments, transfer money and manage overdrafts on-the-go. Nationwide see this as a way of delivering a more flexible and tailored experience for customers.

⁴²Source: PSFK (May 2014, <u>link</u>) ⁴³Source: Finextra (Aug 2014, <u>link</u>) ⁴⁴Source: YouTube (Nov 2014, <u>link</u>) ⁴⁵Source: The Guardian (Nov 2014, <u>link</u>)

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• In savings: One of the most innovative examples of how wearable technology can be used to benefit customers comes from Russia's Alfa-Bank, whose new Activity⁴⁶ platform syncs with a customers' wearable health tracker to monitor their movements. Small amounts of money are transferred to a higher rate savings account in proportion with the amount of exercise done. There is no other way for customers to access this high yield account, and by linking the two together, the bank hopes to provide economic and health benefits to their customers. Early signs are encouraging. In its online video,⁴⁷ the bank notes that human beings should walk a minimum of 10,000 steps per day to remain healthy. However, the bank has found that customers who are signed up for the scheme do twice as much exercise as the average person, and save almost twice as much too.

From data analytics and biometrics to crypto-currencies and wearables, digital is reshaping the experiences and expectations of retail customers. Banks must accept that they are increasingly part of the broader ecosystems that customers are constructing around themselves. However, their place in these ecosystems is far from secure.

Those brands that emerge successful from the digital revolution will be those that ride this wave of change, putting their customers at the heart of what they do, and designing products, services and channel experiences that make interacting with the bank an enriching, rewarding and relevant experience.

Going forward, banks must learn to live with and adapt to disruption. Otherwise they may struggle to grab the opportunities it will afford.

⁴⁶Source: Alfa-Bank, <u>link</u>) ⁴⁷Source: Vimeo/42 Agency, <u>link</u>)

Case study - Nationwide's Quick Balance and Impulse Saver

In June 2014 Nationwide launched two innovative new features for its mobile banking app, Quick Balance and Impulse Saver. Together, these features were a first-in-UK proposition, offering customers the ability to access useful functionality via their mobile banking app without needing to enter their log-in credentials.

Using the concept of 'customer invented permissions' Quick Balance enables customers to view their account balances without needing to enter their log in details, and Impulse Saver encourages customers to save regular, small amounts of money, again without logging in to the app.

The new features required a brand new approach to security authentication, balancing the convenience of allowing users to access some features without having to enter log in details with the need for our customers to feel that their money and account details are always safe.

Both features require the customer to "opt in" before they can access them outside the logged-in area, a process which ensures that appropriate security wrappers are invoked to protect the customer at all times.

Both features have proved to be incredibly popular with mobile banking customers since their launch in June, and valuable insight has been obtained into how Nationwide's customers approach simple banking transactions. For example, a third of active users have opted in to Quick Balance and on average use the service six times a week. Nationwide believes that by providing the capability for customers to "opt in" this enables customers to think differently about how they perform simple banking transactions. The customer is now at the heart of making their own risk-based decisions, giving them more control over the ease with which they can manage their money.



Conclusions and call to action

Conclusions and call to action

It is clear that digital disruption is now mainstream and that the banking sector has to treat this as business as usual.

We have seen that the banks have made significant strides in responding to and shaping the digital services in the market. However, the pace of change is relentless and the expectation is that all of the banks will need to focus on:

- Investing in forward-looking activity to spot the disruptions ahead of them. This is vital to ensuring that banks meet customer needs and are not vulnerable to new entrants cherry-picking parts of their business.
- Working to create a faster adoption cycle for new services and solutions. The pace of change will only accelerate and idea "throughput" for the banks will be essential. The customer will demand that digital banking services meet the same standards of efficiency and ease of use as they are used to from the likes of Amazon, Google, eBay, Apple and so on.
- Continuing to evolve the branch-based banking propositions to change both the structure and role of their networks. Banks need to create a seamless service which delivers the product smoothly and efficiently regardless of the channel.
- Being clear on their role in the emerging "ecosystems" that will form around customer events – do the banks want to be the utility service or the value creator? To be value creators, the banks need to leverage off of their own information to offer new and innovative solutions to the customer.



• Continuing to focus on "fixing the core", investing in resilience, simplifying the processes and services that sit around the core product sets, and allowing banks to provide better services, more quickly to customers. That, ultimately, is the digital promise that banks will need to keep.

For governments and regulators it is vital that they maintain a level playing field between banks and non-banks as digital leads to dramatic change across the industry. Many of the new competitors to banks are not banks and may never be banks. Regulators need to consider how these non-banks can meet the same regulatory requirements to ensure that customers remain protected. The focus needs to be on making sure regulations of activities, not just institutions, are fit for purpose and balance the needs of customers, investors and financial stability. This will reduce the opportunity for regulatory arbitrage and ensure that standards keep pace with the speed of technological innovation.

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³⁰Source: Accenture UK Current Account Customer Survey, 2014 (Note: almost half (47%) of those customers who did not use mobile banking services in 2014 cited security as the key factor holding them back from adoption).

³¹Source: Tech Crunch (Jan 2015, link)

³²Source: Is It You, link

³³Source: PixelPin, link

³⁴Source: Gartner defines "big data" as "...high-volume, high-velocity and high-variety information assets that demand costeffective, innovative forms of information-processing for enhanced insight and decision making", link

³⁵Source: UBank, a fully owned subsidiary of National Australia Bank (NAB, <u>link</u>)

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⁴¹Source: Finextra (Nov 2014, link)
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