Digital banking: from revolution to evolution
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Survey methodology
Our independent survey consulted 145 senior IT decision-makers from across a wide range of financial institutions including: retail, investment and commercial banks; building societies; and payment businesses.

The survey was carried out by Kable at the request of TLT.
Foreword: you ain’t seen nothing yet

By James Touzel

Technology has caused the biggest shift in the banking sector in hundreds of years, changing the way that banks engage with customers and each other.

The shape of established retail banks especially is changing, spurred on by the challenge from fast, focused digital new entrants who are chipping away at revenue streams.

We surveyed 145 senior IT decision-makers from a wide range of financial institutions, from the largest retail banks to niche service providers. The results demonstrate that nobody should write-off the major players with their vast reach, status and economic significance. Quite the contrary. They show every sign of being up for the fight.

Most are turning their technological firepower from the priority of meeting new regulatory standards to developing new digital products and services. Some are incubating outside talent to do it for them, buying stakes in innovative products to launch their own apps and services for an ever more mobile age.

The ability to focus on more than just compliance means that banks and fintech providers are at a crossroads. We are now clearly beyond the digital revolution phase and into an evolutionary one, with more collaboration and dialogue between institutions and developers.

The stakes are high and the complexities many. For fintech companies, this means having strong stable businesses that can be taken seriously. For banks, it means being porous to new ideas and faster at getting them to market.

There are lessons from others going through a similarly seismic shift, but which seem to be reaching digital destinations more quickly. Banks could, for example, learn from retailers who have had to embrace and exploit omnichannel retailing. Many now offer a seamless customer experience online, in store and by phone.

Our survey found that banks are still putting their IT departments in the driving seat when it comes to technology development. Their role is clearly crucial, but are they the right people to lead the direction of innovation for best business advantage? Technology is an enabler not an end in itself. Customers need to be at the centre of digital innovation.

As institutions move to an online future, technology will enable them to harness the added value they need from mining the enormous amount of data available on their customers’ spending habits. This will be central in the evolution from mere holders of money, to advisers on managing it and aggregators of other services.

There will also be significant change in how banks interact with one another as applications using blockchain are developed and tested for commercial feasibility. Although we are still at the stage of hearing about trials from mainstream players, the potential for this rapid, secure, automated accounting and recordkeeping technology is clearly high.

Technology brings with it issues. A future reliance on intellectual property, exploitation of data and shared software will force financial institutions into new contractual obligations, and into complying with strict rules on how customer information can be used. It will also pose questions about cyber security and where liabilities rest.

The decision to leave the EU brings more challenges and greater uncertainty, not least around regulatory issues. There are also concerns about maintaining the fintech talent pool, the threat to the UK’s dominant position as the gateway to doing business with Europe via financial service passporting, and funding for future investments.

However, it is clear that UK customers’ demands for more digitally enabled banking and the impact of new fintech providers will not go away in the next couple of years while the country and the banks consider life post Brexit.

If anything, banks will be under greater pressure to change from new market entrants and banking reforms. These include new remedies from the CMA requiring banks to adopt an open API banking standard and share product information, service quality ratings and customers’ account transaction data.

There are few easy predictions to make about what fintech will deliver, but it is safe to say that what we’re witnessing now is a fraction of what is to come. These are remarkable times. You ain’t seen nothing yet.

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Digital banking: from revolution to evolution
Investment plans

By Jon Gill

Most banks and other financial institutions will spend more on technology in the coming year, with some ‘significantly’ increasing budgets (8%), as they continue to adapt to a digital future.

The commitment to change is clearly there, with a recent survey by Celent showing that European banks are set to spend £46 billion on IT in 2017 in the march away from their analogue heritage.

The top priority for investment over the next three years is online banking, followed by technology in branches and IT systems. Mobile banking, surprisingly, is a distant fourth, perhaps because significant investment has already been made in recent years.

This prioritisation likely reflects a desire to get core banking systems in order before fully focusing on new digital banking products and services. These core systems are, of course, vital to the success of banks, with millions of customers relying on them every day, and service failures often making headline news.

Upgrading legacy systems is no easy task. After decades spent carrying out piecemeal and patchy modernisation, many traditional banks must now untangle and replace these monolithic systems.

However, there is some good news for banks as developers are increasingly providing solutions that take into account these complex legacy issues.

Most financial institutions are investing in technology with the stated aim of generating new business (86%), reducing costs (62%) and improving security (78%).

Some investments are clearly more defensive and aimed at maintaining a competitive position. Whilst customers are historically reluctant to switch banks, there is concern they may be enticed by new digital products and services.

Banks are also determined to stop revenue generating services being cherry-picked by competitors who are able to exploit disruptive technologies, a determination that goes to the heart of how banking is reshaping its identity in the 21st century.

Increasing customer loyalty through technology is certainly an ambition (73%). But achieving it will depend on delivering a ‘frictionless service’ (that is, a smooth customer experience) that constantly evolves to meet their needs.

Many banks are also considering the use of Blockchain, which has the power to speed up...
transactions and replace the creaking bank transfer model, where money only moves between accounts over hours, even days. It is also harder to fool - making fraud more difficult.

A consortium of 50 of the world’s leading financial institution, led by financial technology firm R3, are working to design and deliver distributed ledger technologies to global financial markets. In April Barclays used a blockchain called Corda, developed by this consortium, to test a way to trade derivatives.

When looking at financial institutions attitudes to investing in new technology it is clear that most prefer to follow in the footsteps of others. Few ‘strongly agree’ that they are leaders in developing and using new technologies (21%) and only 43 per cent are investing in a wide range of new technologies. So, whilst there is no shortage of technology companies hoping to sell products to banks, there appears to be some resistance to buying them.

For many, the dilemma remains the same: with so many potential areas to invest in, and the wholesale digitisation of the industry, what’s the strategy?

A focus on fintech, for example, is not necessarily a clear business case for its use. Traditional banks in particular may question whether today’s breakthrough is quickly going to be yesterday’s solution and, as complex businesses, they are often encumbered by their size, public scrutiny and a heavily regulated environment.
Leaving the EU will probably be distracting to the development of fintech in the short term, but it may eventually prove to be a positive stimulus.

Nicole Anderson, Fintech Circle Innovate
Digital banking: from revolution to evolution

Some banks have chosen a different approach. For example, BBVA chose to acquire online-banking start-up Simple in order to offer customers data-rich analysis of their transactions, whilst ImaginBank, has enhanced its platform by integrating it with social networking services including WhatsApp, Facebook and Twitter.

As they adapt, a substantial proportion of banks (55%) have said they are more likely to invest in technologies that have been endorsed by regulatory authorities. Although it’s important to recognise that it is not technology that gets regulated, but its application.

Financial institutions have a lot on their minds, with regulatory changes from the crisis of 2008 still churning their businesses. It is therefore unsurprising that simply not having the capacity to invest remains a sizeable barrier for technological advances (32%), whatever the wider sense of doing so, with complexities from legacy systems ranked as the next biggest obstacle (29%).

Security issues are deemed to be the third biggest concern, with recent cyber attacks on banks such as HSBC and RBS/NatWest still fresh in the memory. Both took place on the last Friday of the month - payday for many - and caused significant disruption to customers who were unable to access their online accounts.

However, there are signs that this threat is reducing. In May 2016 Lloyds Banking Group announced an 80-90 per cent drop in cyber attacks over a two month period, as online criminals and fraudsters were said to have switched their attention to other industries.

Whilst banks are investing heavily in technology, most are taking a relatively cautious approach; it is one that in the near term is likely to be more inward focused and from their own resources. As fintech businesses mature, we expect to see more joint ventures with banks and a significant increase in M&A activity.

What issues or barriers does your business currently face?

- Limited capacity to invest: 32%
- Legacy systems: 29%
- Security issues: 28%
- Customer resistance to new tech: 25%
- Difficulty in measuring ROI: 24%
- Meeting regulatory compliance: 23%
- Lack of knowledge & skills: 19%
- Integrating different systems: 12%

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Digital banking: from revolution to evolution
The fintech question

By Nicole Anderson, CEO, Fintech Circle Innovate

Leaving the EU will probably be distracting to the development of fintech in the short term, but it may eventually prove to be a positive stimulus.

Whilst early stage funding may falter for some, as investors take stock and banks pause for the politics to unfold, the strong fundamental drivers to technological investment remain as they were.

In addition, market forces will ultimately prevail and bring about stability to the UK, with London in particular continuing to attract entrepreneurial talent, something which may accelerate before membership of the EU ends.

Underpinning the future for fintech is that banks understand its importance. Their problem is a struggle to engage with it; instead, often grabbing hold with an almost addictive fascination.

Fintech companies, for their part, sometimes go into developing a relationship with banks without looking particularly robust or stable themselves, scaring off their potential client.

The task of working with fintech as a concept is also made harder when banks park innovative thinking into isolated accelerator programmes, places often removed from their core day-to-day activities and key personnel. The result is that the ideas which emerge, perhaps brilliant, struggle to make it through to the ‘other side’: the traditional corporate structure.

Often overlooked is that the customer, not products and services, should be at the centre of fintech.

This lack of integration can waste energy and expectation. It also feeds a sometimes conservative resistance to change in practice, particularly in retail banks, despite a fascination with it in theory.

Having the right goals will help. They should not, for example, be to meet a marketing ambition, or to copy a competitor. Fintech is not an afterthought, but a ‘constant friend’. This helps identify points of pain where technology could help in a particular organisation. It is then a short step to creating a job specification.

But above all, banks must become more porous to the new ideas that most are encouraging to emerge. They must also allow them to be tested internally and facilitate a transformation agenda. Risk and experimentation are the route to reward with fintech, and it helps internally if not just the head of innovation, but everyone in the executive suite owns part of a project.

Often overlooked is the fact that the customer, not products and services, should be at the centre of fintech. This is particularly true for financial institutions that are moving towards creating ‘digital identities’ so that they can better target services based on an understanding of individual behaviour and lifestyles.

There are great advances to be made in helping banks understand and manage their data as a client management resource, particularly with lending, credit scoring and risk management functions.

But fintech companies need to do more, too. They often fail to understand that at least as important to a potential bank client as digital development is confidence in the developer. A fintech company must be seen as strong enough to support a product that could threaten a bank’s reputation if things went wrong.

Yet not enough attention is paid by fintech firms to make sure that their own foundations are able to withstand the scrutiny a bank will put them under. They need to appreciate that banks are averse to taking on technologies from firms they fear may collapse or be overwhelmed.

This is even more important because a reasonable prediction is that we will see some fintech collapses soon. This is not a sign of failure, but success. It is simply that the current explosive growth in development is unsustainable.

There also needs to be clearer engagement with customers. A banking client in Australia is actually involving their customers in development. They ask questions such as: ‘If we could do this, would you be interested?’ This is a smart, socially-engaging approach entirely in tune with how the relationship between service and consumer is evolving. But I would struggle to name a UK financial institution doing the same.

The banking sector could take a big lesson from this and other industries, such as retail, which routinely engages with the public to work out what they will want. It is essential to keep your customers at the centre of what you do digitally, not as mere recipients of what you have already decided.
As we move towards a ‘bank of me’ era, with operations increasingly digitised around customer needs, the task for many financial institutions is to make sure their IT systems can cope.

It’s not just about technology. Digital transformation represents a technical and cultural shift. It is exposing a multitude of software and systems that need to be integrated as well as a significant change to the way banks invest in and manage their operational IT services.

IT budgets have been growing year-on-year but financial institutions struggle to prioritise spend on technology to support new digital banking products and services. A survey by Celent showed that by 2017 European banks expect to spend 78 per cent of their IT budgets on maintaining existing technology and just 22 per cent on new technologies.

The extent to which an organisation is moving to a digital mindset is often revealed by its approach to developing new products and services. In the tech world, an ‘agile’ project approach involves developing a ‘minimum viable product’, with rapid iteration, user testing and often, being allowed to fail, learn and improve.

It typically means starting projects without all the answers, but some of the questions. This can be challenging for more traditional financial institutions, who are used to rigid ‘waterfall’ projects. This is borne out in our survey. When developing in-house, there is a clear preference for a traditional programme (60%), with the more fluid agile style favoured for externally developed projects (61%).

Interestingly, building societies are showing greater use of agile methodology (83%), which may be explained by their smaller, more focused operations being more conducive to change. For example, in June 2015 Nationwide was the first UK high street provider to launch an app for the new Apple Watch.

The top area of investment in operational IT is data centre consolidation (72%), where the aim is typically to reduce operating costs and IT assets. Other key areas for investment include mobile services, data analytics and IT outsourcing.

All of these investments will help enable financial institutions to deliver the digital banking products of the future but it can be a long road from IT investment to viable product. It is therefore vital that these investments are as future proof as possible.

Top areas of investment in operational IT

- Data centre consolidation: 72%
- Mobile services: 65%
- Data analytics: 65%
- IT outsourcing: 62%
- Mobile & flexible working: 61%
- Process automation & digitisation: 60%
Given all the hype around ‘big data’, it is perhaps surprising that investing in data analytics ranks in third place. This is perhaps because banks and other financial institutions are more focussed on keeping a grip on data right now than exploiting it.

As banks seek to meet customer demand and innovate to keep pace, their systems have often been subject to a number of crashes, which have caused embarrassment and threatened consumer confidence. It goes without saying that it’s crucial these are managed effectively.

In other industries, such as the public sector, there’s been a general move away from wholesale outsourcing to multi-sourcing. It’s a means of taking back some control of IT service management and working with the right supplier, for the right service.

The majority of respondents in our survey still centrally outsource their IT operations to a single prime supplier, indicating that there is still some way for financial institutions to go towards using more dynamic operational IT models.

Other popular approaches involve contracting out IT operations in separate ‘service towers’. Our survey showed that 38 per cent of respondents are using this approach to service individual business divisions or to service all business areas.

The reliance on outsourcing or the contracting out of services raises important issues. Financial institutions must be careful to detail liabilities and specific responsibilities in order to ensure they are protected from the failures of third party suppliers.

Our survey also revealed that financial institutions are embracing cloud computing. The results show a willingness and maturity amongst institutions in taking advantage of cloud services to modernise their infrastructure.

As you might expect, most IT decision makers prefer private cloud (83%), where sensitive data is stored in a specific, dedicated location with high levels of security and availability.

What’s interesting is the use of public cloud (79%) and community cloud (61%) services as well as the hybrid model, which involves a mix of private and the more open clouds (public and community) for software development and administration.

The FCA gave its support for the use of cloud services back in November 2015 when it published a guidance paper on outsourcing to the cloud.

This has led to a surge in interest from financial institutions but there are still concerns about the regulatory, cyber security and data protection risks.

Interestingly, a number of large infrastructure providers such as Microsoft and Amazon, have recently launched data centres in the UK, with the specific aim of addressing highly regulated organisations’ privacy and security fears.
Large banks resemble ocean-going tankers: it can be tough to turn them around. But there is evidence that they are succeeding with technology. Accenture reported that two-thirds are already using open innovation programmes to integrate applications and collaborate with business partners.

As digital disruption continues, could we eventually see the role of banks change entirely? We have certainly seen this happen in other industries where there are now taxi companies that don’t own taxis (Uber), holiday companies that don’t own real estate (AirBnB) and phone companies that own no telco infrastructure (Skype).

Could we, in fact, be witnessing banks’ long transformation towards becoming software companies? It’s certainly intriguing, for example, that technology engineers now account for one third of the workforce at Goldman Sachs.

It will also be interesting to see how banks manage their operational IT investments in a post-Brexit environment. With uncertainty being the watch word, you would expect banks and other financial institutions to re-trench and postpone significant investment until the fog clears.

However, Brexit may also present an opportunity for institutions to re-focus their investment into more innovative solutions, targeting customer experience and retention.

Concerns about cloud services

- Regulatory and compliance: 68%
- Cyber security issues: 66%
- Data protection/location: 65%
- Access to data: 64%
- Obtaining liability cover: 63%
- “Force majeure” clauses: 63%
- Data extraction on exit: 61%
- Availability, resilience, performance: 57%
- Intellectual property risks: 56%

Planned usage of cloud services

- Private cloud services: 83%
- Community cloud services: 61%
- Public cloud services: 79%
- Hybrid cloud services: 74%

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Paying back the technology debt

Matt Came, PwC Financial Services, Technology

Many banks have to cope with what might best be described as a technology debt, accumulated over a very long time, with some still relying on systems originating in the 1980s, 1970s or even the 1960s. Sustained underinvestment means that these are creaking at the seams, whilst at the same time IT spending has been distracted away from the customer and towards meeting mandatory regulatory requirements.

The rule of thumb in recent years seems to have been: if it isn’t necessary for regulatory purposes, de-prioritise or do it more cost-effectively. The result is a patchwork of out-of-date systems being bolted around a core system that may be as much as 40 years old.

Due to their size, established retail banks seem to be struggling in particular. Smaller regional banks and building societies, which were slower adopting technology, and operate simpler businesses on a smaller scale, do tend to have slightly more modern systems as a result.

There are other reasons too, why bigger banks may have found the rapid pace of opportunity hard to seize and been slower to market with refreshed systems that can offer new products and services. At a practical level, they are complex institutions with senior executives in place for perhaps two or three years before moving on. Many will hesitate before initiating a root-and-branch overhaul of systems that are fraught with risk and would deliver benefits long after they will be around to take the credit.

The FCA has made clear that offering digital services without knowing if the IT is up to it is now a conduct issue

Another issue is often the cultural shift required. It can take time to convince people that moving to new digital services will be of benefit to both staff and customers, and the importance of updating legacy systems.

But that culture is starting to change. The Financial Conduct Authority (FCA) has made clear that offering digital services, without knowing whether the IT is up to it, is now considered a conduct issue.

This is a significant development. For the first time a regulatory link exists between what customers have a right to expect and that distant, humming server room. A substantial fine given to a major retail bank for a computer failure in 2012 shows how seriously system resilience is being taken by the FCA.

The rise in challenger banks, and increasing customer expectation, means that financial institutions know they must get better at, for example, providing real-time information and the sort of personal spending analytics that new entrants, such as companies providing pre-paid debit card services, are able to offer.

It is not enough just to invest in a new app if your mainframe systems are too old and complicated for the crucial extraction of customer information.

There are also issues around how well banks can engage with fintech companies that are driving innovation in banking. Banks are big bureaucracies, but the issue lies in how to contract outside services because current procurement processes make it very difficult to deal with start-ups with no track record.

The fear is that any new system developed externally is a potential security breach, and letting immature systems into the bank may cause unexpected issues. One thing they do know: wherever the bug starts, the regulatory buck will stop with the bank.

Senior executives recognise the dilemma of wanting to encourage timely change in a rapidly evolving sector, but also that doing so produces a threat. As a result, many are trying to introduce a multi-tiered framework for assessing an external development.

This is recognition that the typical standard one-size-fits-all due diligence process is unnecessary and slows down adoption. The attention needed for a product from a global IT heavyweight is plainly going to be different to that required for one from an early stage start-up.

Banks have traditionally been better at investing in and recognising where to spend than they have been at introducing outside firms into their own systems.

It is hard to generalise across the financial sector, but many older banks still have a mountain to climb in operational terms to have modern, integrated systems unhampered by legacy software issues.

But they’re getting there. They have already got much better at working out what is critical to their customers. They now need to get smarter at engaging the fintech community to help deliver innovation, enhance customer service and transform themselves to be fit for the future.
Digital banking products

By James Touzel

Digital gives banks and other financial institutions the ability to offer a branded and distinctive omnichannel experience that meets customers’ needs.

This is clearly the future but sheer size, status and wide customer base could be slowing innovation in some institutions, particularly the larger more traditional banks with their cautious underpinning.

But less obvious is whether banking has opened up wholly to external ideas for developing the technology necessary. Instead, there seems to be a reliance on internal technical resources.

It’s interesting to see where innovation is taking place. We found that half of financial institutions are fully developing technologies in-house and 37 per cent are working in partnership with external consultants and technology providers or leaving it to them entirely (11%).

This division between internal and external can be construed as a positive trend towards collaboration. Perhaps less reassuring for those who want to see change accelerated is that a majority (58%) expect their IT departments to lead digital innovation. Whilst IT teams clearly have a vital role to play, this result suggests that technology rather than customers are driving change.

Only 17 per cent put Marketing in the driving seat and fewer still have a dedicated innovation team (8%), despite the success that Barclays, RBS, Lloyds Banking Group and other leading banks have had with their digital innovation programmes.

Looking at the top retailers, who have arguably moved faster and further digitally for their customers, we can see that they have understood it’s the application of technology and the customer journey that differentiates. More often than not, marketing and digital teams take the lead. The underlying technology is rarely a differentiator as digital products are often built using open source or common technologies.

New product development has largely focussed on mobile banking applications and services, with 40 per cent offering location-based banking promotions, 37 per cent offering branch/ATM finders and 31 per cent offering digital wallets. Many more are developing or testing these services, so we can expect an explosion in new products over the coming years.

Such explorations are vital to help banks define their proposition in the face of fleeter, focused disruptors, and they know it. We should also expect to see more broader-based financial products being offered, such as money management tools, or aggregated financial services.

In some respects, the sense of change within banking is currently more obvious than the evidence. If we look again at the retail sector, where many have invested heavily in delivering an omnichannel approach, the experience of shopping in-store and online actually feels very different these days.
Banks, by contrast, still seem much as they were. There is an overwhelming view within banking that technology has transformed the customer services offered in branches (82%) but to the casual observer this can often seem superficial.

The current consolidation of sofas, soft music and cash machines is unlikely to be the last word. Branches must adapt and take on the ‘shop window’ marketing role that a high street presence has become for many retailers.

Technology could prove to be the saviour of bank branches, at least in the short term. Services such as virtual in-branch advisors provide a cost-effective way of conducting mortgage interviews and providing investment advice. Three-quarters of retail banks are now offering or testing this service.

Nationwide has led the way with its use of virtual advisers. Their ‘Nationwide Now’ service is available in over 400 of their branches. However, it can only be a matter of time before these services move online.

Lloyds Banking Group’s recent decision to close 200 branches, as customers choose to use their online and telephone banking services, is evidence of this shift.

Growing use of social media to deal with customer service issues (87%) shows firm engagement with a key component of the digital age, and is perhaps a sign of some important lessons being learned from retailers.

Banks are also making use of social media for internal communications (81%) and product development (77%), demonstrating that there is movement in the direction of iterative, experiential development.

Top mobile banking apps/services

- Location-based banking promotions
  - Offering 40% | Testing 35%
- Branch/ATM finders
  - Offering 37% | Testing 38%
- Digital wallets
  - Offering 31% | Testing 44%
- Affiliate/partner offers
  - Offering 21% | Testing 46%
- Photo-based data capture
  - Offering 17% | Testing 52%
In a similar vein, data analytics is being used to segment customers (85%) along with its more traditional use in fraud detection (85%) and risk reporting (83%). A separate survey found that 75 per cent of IT decision makers at retail banks are intending to significantly increase their analytics budgets in the next two years.

Confidentiality and exclusivity agreements are the primary methods used to give digital products legal protection, closely followed by intellectual property registration. This further demonstrates that innovation lies in the application of the technology, not the technology itself.

A small minority seem exposed, either ‘not actively’ protecting new digital services (6%), or unable to do so because it’s based on a third-party shared service (6%).

An increasing use of social media, app-based technology and data analytics will help put banks front and centre in our modern lives and allow them to become more relevant and valued by their customers. They will also help determine what once would have seemed an odd question: do consumers trust their bank more than, say, Apple to manage money? How it is answered in the coming years will define the future.

There is a journey ahead. Barely half the financial institutions in our survey (52%) consider their approach to investing in digital banking ‘comprehensive and proactive’. A significant minority (33%) see it instead as ‘opportunistic and reactive’.

But there are players in the market now who are inherently ‘digital by default’. Fintech companies are potential collaborators and competitors, across the banking spectrum – with banks seeing a threat to online banking provision (77%), international money transfers (75%) and digital currencies (73%).

Banks are evidently aware of the threat from nimbler digital rivals and are plainly determined to compete vigorously. Our survey suggests that despite all the obstacles, from size to conservatism, financial institutions are moving forward into digital products. What they may need to do now is step up the pace.

Get in touch

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Banks are not stupid. They got the memo about their world turning digital and know, for example, that mobile is big and ‘millennials’ do things differently. They are fully engaged.

Not only will Brexit not change any of this, it makes digital transformation even more urgent as banks must respond to increased volatility, rapidly changing market conditions, changing regulatory environments across Europe and increased pressure on operating margins. The turmoil in financial markets from the UK seeking a different relationship is just a speed bump in financial services transformation to a digital future.

Challengers, however nimble and focused, may dent the fortunes of the established giants but won’t bring them to their knees. What we are more likely to see is partnerships, and for one simple reason: banks have the customers, fintech has the expertise. Each needs the other. There will be issues, but not total war.

One major reason for co-operation is that scale is important, even for new entrants. In order to be competitive, online banks need to have at least two million customers each. To put that in perspective, Lloyds Banking Group already has 11 million online banking users, including more than 6.5 million active mobile users.

Anyone who doubts where banks will be in relation to competition need only ask one question: ‘would I put my salary into that challenger bank?’ The answer to that is what underpins the future.

My belief is that truly novel entrants will be offering ancillary services, with only one or two breaking through to fully rival the trust given to the major institutions. In other words, banks need to be afraid of each other, not challengers.

They are already further down the road to what is without question a fully digital future than they often get credit for. Mobile banking is happening now and big organisations such as Lloyds, Barclays and Halifax, already have apps that rival anything on the market from disruptive arrivals. These have excellent customer interfaces and also segment between consumer and business markets.

Whilst the technological challenges seem formidable if confronted, they appear less so if side-stepped. Some financial institutions are sensibly bypassing their core computer systems to create parallel structures focused entirely around digital offerings, not only hosting their own platforms but also those developed outside that might offer complementary services.

This makes better sense than trying to disentangle and rework existing core systems, which are finely calibrated to deal with compliance requirements and are highly complex pieces of software engineering.

The head of IT at a major bank said that he went to senior executives and asked them how much they thought it would cost to replace just one of their core systems. ‘Forty million dollars,’ came the reply. ‘Try $400 million,’ he told them.

Although conservatism is their strength, not a weakness, banks are also getting nimbler at making decisions about which technologies will work for them. Santander, for example, has put one person in charge of development and acquisition of fintech.

There is also the further future to look at, particularly implications from the ‘internet of things’. Almost daily, appliances are turning into e-commerce devices, gathering and controlling flows of data. Financial services businesses know how to monetise information, and are working on doing so, which means big opportunities for banks.

One prediction can be confidently made: processing transactions will soon not be a way to make a living. Margins are wafer thin and being driven down further. Banks will have to do something else. So anything that helps them to monetise data will be valued.

Because of new entrants chipping away and the huge potential rewards, the future for fintech is still incalculable in terms of its impact on the banking sector. But what’s quite clear now is that the biggest rewards will come from co-operation, rather than challenge.
The pace of technology-driven change in financial services is gathering speed all the time, and nowhere is this better reflected than payment services.

New market entrants appear with dizzying frequency from within the banking world and, more interestingly, from other sectors. Mobile network operators, technology companies and social media providers are all operating and competing in this space alongside established players.

What’s driving this activity is the realisation that a high quality, friction-free payment experience is critical to customers and merchants in an increasingly mobile, instantaneous world.

The organisations that have traditionally dominated the payment services ecosystem, in particular acquiring banks, card schemes and card issuers, are painfully aware of the threat from new competitors and new payment methods. They face a dilemma. The emerging payments landscape now encompasses technologies as diverse as mobile, wearables, tokenisation, peer-to-peer, biometrics, and digital currencies.

The optimum engagement model is far from clear. What is clear is that the potential cost of engagement, whether by driving internal development, outsourcing, partnering or acquisition, is high. And there’s no guarantee that the benefits will outweigh the cost, when anyone from a more fleet-of-foot fintech start-up to the most valuable company in the world (Apple, at time of writing) could launch a product with market-changing impact.

Financial institutions operate in an environment where regulators are increasingly demanding, and – somewhat ironically – increasingly focussed on fostering innovation as a method of encouraging competition.

The decision to split out regulation of payment systems in the UK from the FCA in April 2015 was driven by precisely this agenda, and the Payment Systems Regulator now has some of the strongest powers possessed by any UK regulator.

Likewise, the new EU Payment Services Directive (PSD2) contains provisions designed to lower barriers to entry by requiring banks to open up information to the market.

Early indications are that the UK will continue to pursue standardisation in accordance with PSD2 despite the Brexit decision. The Payment Systems regulator has been keen to stress the benefits of inter-operability for consumers.
In this context, it is surprising that only 5% of institutions are apparently aware that they now have to open up access to customer accounts for other payment service providers under PSD2. The potential for the development of challenger technologies based on this part of PSD2 is hard to underestimate.

The apparent lack of focus on this aspect of PSD2 may be due to the more immediate challenges facing financial institutions. Many are still dealing with the fallout from the financial crisis and subsequent investigations and claims. They now have more to worry about as the post-Brexit landscape takes shape.

Larger banks have also faced the considerable burden of ring-fencing reforms, which requires separating their retail and investment banking divisions. All of this while suffering from the headwinds buffeting the global economy and operating on low margins flowing from the continuing depressed Bank of England base rate.

In the face of these difficulties, established players still hold a number of trump cards, not least their ubiquity, credibility, convenience and trust. The dominant payment services offered to merchants remain chip & pin (65%) and contactless payments (58%).

It would be wrong to portray the arrival of Apple Pay (or Android Pay, or Samsung Pay) as the death knell for traditional payment services. Apple Pay tokenises existing payment cards and uses existing payment scheme infrastructures to process payments.

There are new payment services which could theoretically present a more existential threat to the status quo by avoiding this infrastructure (eg peer-to-peer and digital currencies) but these currently lack the scale, market penetration and broad user confidence to mount a serious challenge at this stage.

Our research shows that financial institutions are evidently not standing still, even if their direction of travel is often difficult to plot. A good example of effective technology-led change is the increasing use of ‘big data’ to enhance core payment services. Over 70% of institutions providing payment services to merchants are offering, or planning to offer, data analytics and customer intelligence, according to our research.

This may manifest itself as a card issuer offering personalised reward schemes to customers, or a merchant acquirer making data analytics tools available to retailers to give a deeper insight into customer behaviours via their payment habits. These types of offerings are now commonplace and they are the result of successful development and collaboration to bring them to market.
But established institutions cannot be complacent. Their use of technology is often incremental rather than innovative, responsive rather than pro-active.

All the while, disruptors are weaving their way into consumers’ lives in new ways that could leave banks and payment schemes as unrewarded bystanders.

The world is moving mobile and even physical credit and debit cards may soon go the way of chequebooks, as historical curios. The future is mapped out as one of friction-free payments involving mobile phone swipes, instant transfers and immediate access to payment information.

Established payment services providers are faced with tough choices. They want relationships with challengers, some of whom are taking their business away. They risk committing themselves to technologies that could be outdated by the time they are integrated into their own systems.

Apple Pay is a good example of an uneasy modern marriage. It is both a new service for a company with no inherent interest in banking niceties and one underpinned by a traditional bank debit or credit card.

The speed of change is rapid and unpredictable. In less than a generation we’ve gone from chequebooks to chip and pin to payments authorised via a thumbprint on a screen. No wonder it’s hard to keep up, or know precisely who to keep up with, but it promises to be quite a journey.

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We may look back on 2016 as an inflection point when the relationship between the financial institution, technology provider and regulator was put on a solid foundation in leading economies.

With London being a particular driver for fintech, and the EU revised directive on payment services, PSD2, opening up software access, these enmeshing relationships are vital and working well as new value propositions are encouraged.

Banks want to know how much of their own resources developing a technology will take, and what will they be left with at the end of the process in terms of a return for this non-tangible investment. Are they getting intellectual property rights? Will there be a significantly discounted service? They also need to know that the technology provider itself will still be around in three or four years.

London’s importance in capital markets also means that the potential from the next significant change, which is likely to come from blockchain technology finding wider applications, is likely to be unlocked in the city – a city now in the first tier of fintech development globally alongside Tel Aviv, San Francisco and New York.

But to maximise the opportunities ahead for fintech companies everywhere, they need to improve their understanding of business processes in financial services, to see how it looks from the receiving end.

For example, banks want to know how much of their own resources developing a technology will take, and what they will be left with at the end of the process in terms of a return for this non-tangible investment. Are they getting intellectual property rights? Will there be a significantly discounted service? They also need to know that the technology provider itself will still be around in three or four years.

The best fintech firms are sophisticated enough to navigate these conversations; to articulate and negotiate a win-win scenario for both parties, giving benefits and security to both sides where it is needed. They also understand compliance concerns. These can be significant, but are not always automatically addressed by developers.

A potential deal last year between a major retail bank and a recognised technology brand offering an innovative, friction-free approach to consumer payments collapsed; and not because of the technology, but from the failure of the provider to appreciate the regulatory landscape in which the bank operated, or to adapt when it did.

But most of those involved in fintech do now recognise that this is an evolution, not a revolution taking place, and that the last five or ten years has been one of thoughtful experimentation rather than reckless ambition.

I do not see a ‘disruptive’ agenda, with all the disorganisation that implies. In fact, the agenda I see is one of dialogue. We should not be surprised. The established financial services industry is the lifeblood of society, the bedrock of how our economy functions, and is ultimately in control of the change agenda by virtue of its sheer scale and status.

Financial services institutions globally also tend to be conservative for a reason, but that should not be confused with being regressive. They exist in a heavily regulated environment and this colours every move they make.

They have been happy to shrug off losing niche, unprofitable parts of their activities to new digital entrants, but are not giving up any ground on their core, revenue-generating areas.

And I doubt they will. Banks have a powerful place in society. Issues of trust, meaningful capital and support are not ones that customers are going to give up on, or which can easily be replicated by an insurgent new entrant.

What we will see is existing financial institutions, whether it’s banks or someone like PayPal, focusing on their position by offering many more service products on mobile devices. These players are going to guide and shift how we as consumers interact with financial services. This will unlock a new era of engagement and interest, and help us all to save more, manage our money and make wiser decisions.
Recent times have seen an increased awareness by the Financial Conduct Authority (FCA) of the need to engage with and foster innovation within the banking technology sector and financial services generally.

The challenge for the FCA is balancing the constraints of operating within a highly complex and restrictive legal framework with the need to be nimble and responsive to innovation. In an effort to achieve this, the FCA launched Project Innovate in October 2014.

Project Innovate was tasked with encouraging innovation and promoting competition through disruptive innovation. Curiously, most respondents (73%) had ‘limited or no engagement’ with the FCA when it came to digital developments.

Few, it seems, have had much involvement with Project Innovate (37%). Encouragingly however, of those who had engaged with Project Innovate, an impressive 43 percent described the FCA team responsible as ‘very helpful’.

The disparity between low engagement overall with Project Innovate and yet strong satisfaction levels where there is engagement, suggests the FCA is supporting digital evolution, but institutions are still wary of approaching the regulator in any guise. It’s perhaps still early days for this more open and collaborative relationship with the regulator.

Coupled with Project Innovate is the Innovation Hub, aimed at providing firms with fast and frank views and support on the regulatory implications of a proposed new technical concept. This could prove to be a useful service as 55 per cent of respondents said they would be more likely to invest in new technologies if they have been endorsed by the appropriate authorities.

Following perceived success with its innovation initiatives, the FCA has expanded Project Innovate to include a ‘regulatory sandbox’.

The ‘sandbox’ is intended to be a ‘safe space’ in which businesses can test innovative products, services, business models and delivery mechanisms. This is done without immediately incurring all the normal regulatory consequences of formally engaging in the activity – a form of regulatory ‘try before you buy’.

Despite nearly a tree’s worth of regulatory olive branches, a common grumble is that the FCA still plays its cards close to its chest. Regardless of these recent initiatives, including the ‘rules-free’ environment of the sandbox, there is still a rocky and often uncharted path to take an idea from inception to launch.

From the perspective of fintech innovators and other developers of digital technology, the quandary still remains – whether to invest large sums into developing new software without a definitive steer from the FCA.

‘Nimble’ is a word that needs to be more readily associated with the FCA’s processes. One option would be to offer qualified approval in principle of a concept subject to agreed pre-conditions being met. This would help firms manage costs and avoid delays in the design process. By giving qualified approval in principle, the FCA would at least encourage more innovation.
The majority of institutions we spoke to see value in the FCA supporting technological innovation, with 32 per cent believing that significant involvement is needed to protect customers.

However, a sizeable minority thought there should be no regulatory involvement at all (26%), which may reflect historic frustrations. As one respondent put it, “perhaps they [the FCA] could try to develop a better understanding of the culture of retail banking.”

But Project Innovate is an encouraging sign that the FCA, like the sectors it regulates, is changing. Another is that it is employing more people with software development experience who understand the challenges being faced.

Banks, in turn, may need to understand better the legislative climate. The EU General Data Protection Regulation (GDPR) will apply to all EU member states from 25 May 2018 and the UK’s own data protection laws are likely to evolve to mirror the regulation.

The resulting changes will be sweeping in scope, with significant compliance issues for banks and how they engage with their customers.

Yet nearly half of respondents thought the coming GDPR changes would have ‘low or no impact’ (47%). This is either a spectacular misjudgement, or more likely reflects a view that data protection is already central to how banks operate.

What does suggest a lack of awareness is that 58 per cent considered themselves ‘quite or very prepared’ for the changes, despite the absence of a finalised text at the time of the survey. Now that the text has been finalised and published, it is clear that data portability between banks and the right to be forgotten will require thorough consideration and potentially significant changes.

Will current software systems be ready? Banks hold valuable data which they will hope to exploit. But using that data will be complicated by the requirement to get explicit consent from customers, and there will be severe financial penalties for breaches.

Gathering data where required to fulfil a contract may not require consent; for example, to meet anti-money laundering rules, but assessing circumstance requires planning and review.

There is a similar pattern with the new Cyber Security Directive, due to come into force across the EU in August 2016. Implementation into member state law is expected in 2017-2018, so the UK may require implementing legislation before it leaves the EU.

In any case, in conjunction with a move towards data protection reform, it is likely that the UK would implement similar information security requirements nationally. A majority (58%) anticipate ‘low or no impact’ from its provisions, while 63 per cent are ‘quite’ or ‘very’ prepared for the change.

With data gathering and cyber security intertwined, it might be wiser to reassess preparations for both.
The FCA has made clear that offering customers digital services, without knowing whether the IT is up to it, is now considered a conduct issue.

Matt Came, PwC Financial Services, Technology
Banks will also need to look carefully at the new remedies published by the Competition and Markets Authority (CMA) in August 2016 following its Retail Banking Market Investigation.

One of the key remedies will require the UK’s largest banks to develop and adopt an open API banking standard so as to share information with other banking providers and third parties such as price comparison websites and fintech advisory services.

Banks will be required to share product information, reference data (eg branch and ATM locations), service quality ratings and, subject to customer consent, customer account transaction data.

Customers can then use digital applications to manage their accounts with multiple providers in one place, compare banking products on the basis of their own requirements and get personalised financial advice and offers.

The timescales are ambitious with the least sensitive information required by March 2017 and current account transaction data expected to be released by 13 January 2018 (the transposition deadline for PSD2).

Along with the implementation of PSD2, which will require banks to open up access to customer accounts to other payment service providers, the CMA’s remedies are expected to rapidly accelerate technological change in the UK retail banking sector.

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The new EU Cyber Security Directive

37% think they will feel the impact of the directive
58% do not think they will feel the impact of the directive

63% are prepared for the changes
37% are not prepared for the changes
A data-driven digital future

Matthew Herbert, Director of Strategy and Digital at British Bankers’ Association

Digital technology is shaping our lives at an accelerating pace, and banks are fully engaging with the demands of customers to have a frictionless, omnichannel experience.

These are transformative times. For example, by 2020 most of us will be accessing our current accounts through mobiles; and that will be ahead of all other ways combined, including desktop computers.

Making that possible, and other changes probably not yet even dreamed of, is a formidable challenge. New technology that even until quite recently seemed at the far-flung galaxies of innovation will be widespread: wearable technology, biometrics, and robotics. In other words, this will be a customer-led revolution, as accessing money or financial advice on different devices becomes even more popular.

Any suggestion that the industry has been slow to respond to fintech as a way to reach the demands of customers is to misunderstand the competing pressure on resources in recent years. In reality, IT budgets in banks have had to prioritise mandatory change requirements to ensure compliance with regulatory changes that followed from the financial crisis.

Most retail banks are looking to fintech as a way to offer more personal finance management tools, to empower consumers, particularly with robo-advisers, as a key to their future.

The ‘nudge’ app from HSBC is an early example of this personalised engagement. It lets people know when they might be spending too much; and the video conferencing service offered by Nationwide for mortgages is another.

Expect more. Many new apps and services will focus on the user interface to provide that frictionless experience. More than 23 million bank apps were downloaded in the first eight months of 2015, a rise of 8.2 million over the same period in 2014.

Worth noting, too, is that the major retail banks are not niche players, picking off particular digitally-literate demographic groups with a sly software offering. They have a wide spectrum of customers across all ages to serve, and are also committed to ensuring that everyone has access to banking facilities.

So the future for incumbents will be omnichannel, with branches continuing to play an important role, and consumers’ demands for digital products and services driving investment and innovation.

As these mandatory changes are completed, incumbent banks will be in a position to focus IT resource more fully on customer expectations and to compete with digitally focused new entrants. Not that those expectations have been neglected. Innovative partnerships with start-ups, Santander with Kabbage for example, and accelerator programmes to nurture new programmes in-house, such as Barclays’ Rise, are standard.

What they demonstrate is that fintech is certainly not viewed as a threat to incumbent banks, but is being embraced by them. Digital innovation is expected to provide the personalised, seamless experience that people want. Enormous resources will be put towards that over the next few years.

Most retail banks are also actively looking to fintech as a way to offer more personal finance management tools, to empower consumers, particularly with robo-advisers, as a key to their future.

Banks already know their customers very well. In fact, a technological challenge they face is sorting through the data they currently hold, and to pull from it new insights into how they can provide enhanced products and services to benefit individual consumers. With appropriate data security safeguards, and looking to fintech to make it possible, consumers are set to benefit from a more personalised, relevant experience.

We are also fortunate that the political and regulatory landscape is progressive in the UK, although the challenge will always be to strike a balance between protecting consumers whilst allowing innovative products to appear. But there is also the prospect of a more secure banking environment emerging from technology, with a great deal of interest in electronic verification of customer identities.

Whilst much has already been achieved, more is to come and will be led – crucially – by customer demands. Digital banking is all our futures.
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Digital banking: from revolution to evolution
Banks have a powerful place in society. Issues of trust, meaningful capital and support are not ones that customers are going to give up on.

Tommy Marshall, Partner at Capco
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