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FUTURE OF PAYMENTS

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OPEN BANKING

Disruption is slow burn in banking

Slow to take off, open banking could yet transform financial services and offer better deals for banking customers

IAN FRASER

Born in a sea of hype on January 13, open banking has so far fallen short of delivering the promised financial revolution. We have yet to see any “killer apps”, dramatic changes in consumer behaviour, sudden doses of competition or tectonic shifts in the UK banking market.

Mandated by the Competition and Markets Authority (CMA), open banking forces the UK’s biggest banks to share their data securely with approved third parties in areas including account information and payments, using a statutory set of application programming interfaces (APIs).

The hope is this will prise open the banking market, encourage new product development, attract new disruptive players, and give consumers more choice and better deals.

Mark Curran, open banking director at Clydesdale Bank parent CYBG, says: “We never expected a revolution. In the medium to long term, open banking is going to have a major impact. It just needs time.”

Jamie Campbell, awareness head at financial network Bud, adds: “A big bang was always unlikely. January 13 was the day the banks wrote the technical aspects of how we were meant to integrate with them. There was always going to be a lag for us to implement on the other side.”

However, some sector observers wonder whether the banks have a hidden agenda to strangle the initiative at birth. “Legacy banks would like to thwart the efforts of fintech companies and challenger banks to take their business,” says Brian Scott-Quinn, emeritus professor at Henley Business School. “They keep to the legal requirements while slowing down the ability of APIs to be useful to those trying to compete.”

Senthilkumar Ravindran, global head of xLabs at Virtusa, adds: “As things stand, it’s not in the banks’ interests to promote open banking. The way the legislation is drafted, third-party providers get a huge amount of benefit, while banks have to give away exceptionally valuable data.” The European Union’s General Data Protection Regulation had further dented banks’ enthusiasm, says Mr Ravindran.

Consumer apathy and scepticism are also delaying things. Mr Scott-Quinn says: “Most consumers don’t really want to share their data, fail



Ameen Fahmy/Unsplash

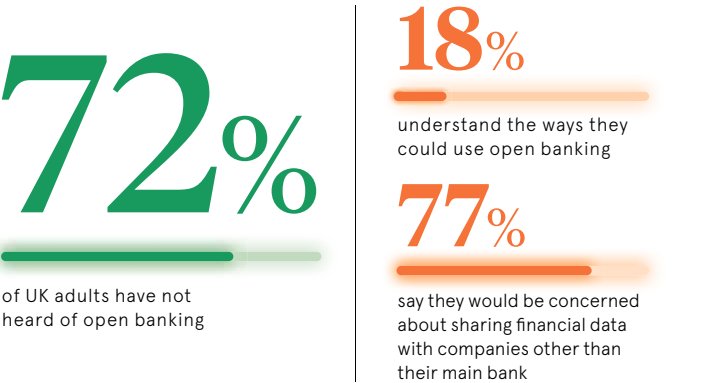
to see any real benefit or are concerned their personal data will be comprised.”

Stuart Coleman, chief strategy officer at the Open Bank Project, an open API store, adds: “Most consumers will find open banking scary – the biggest obstacle is getting people to understand how this can benefit them.”

For open banking to really fly, most industry watchers believe the incumbent banks and the fintechs are going to have to collaborate better. Martijn Hohmann, chief executive of digital banking platform provider Five

Degrees, comments: “Trust between third-party providers and bank is what’s missing.”

Behind the scenes, the open banking sector is a hive of activity. Sixty seven firms are using open banking and, between them, they used the technology three million times in July, up from two million in June, according to the Open Banking Implementation Entity (OBIE). Funded by the UK’s nine largest banks and building societies, this organisation was founded by the CMA to create common standards and guidelines for the sector.



YouGov 2018

“The number of financial services companies wanting to engage with us on API integration has risen dramatically this year,” says Jonathan Lister Parsons, chief technology officer of pension fintech PensionBee. “This suggests companies are anticipating open banking will eventually become the new normal and they’re trying to figure out what an API-led innovation strategy looks like.” Both Clydesdale Bank and HSBC have already introduced open banking products, respectively B and Connected Money.

The OBIE has been accused of prioritising the interests of banks over those of the fintechs that are hungry for access to APIs. Mr Coleman thinks the OBIE should have wielded a bigger stick on the banks. “It should have forced the banks to connect better,” he says.

However, OBIE trustee Imran Gulamhuseinwala claims this is happening already. “The OBIE will be focused on supporting the banking, credit card, building society and e-money sectors in ensuring the standards are implemented with a high degree of conformance and reliability,” he says.

Some believe a tweaking of the underlying legislation might loosen the open banking floodgates. Signicat identity architect John Erik Setsaas says the EU’s Second Payment Services Directive should be extended to cover all types of account including credit cards, and that digital IDs should be made much more widely available to ease account opening and migration.

OBIE communications head Emma Byrne insists that open banking was always going to be a slow burn. “We’re far, far ahead of any other country in the world,” she says. “There’s no template or manual for what we’re doing. We’re designing the standards from scratch and in consultation with huge numbers of stakeholders. There are some interesting propositions slowly making their way through the pipeline and we expect to see some real game-changers in 2019.”

Five Degrees’ Mr Hohmann expects to see the first game-changing product by 2020. “Once a few strong propositions come to market, and are successful, consumers will jump at them,” he says. “Open banking is then going to become among the hottest topics in boardrooms both of banks and non-banks.” ♦

Getting physical looks on the cards



Biometric identity checks could hold the key to countering fraud and offer a more convenient way of paying, but obstacles may stand in the way of widespread adoption

JOSH SIMS

Biometrics has been called “naked payment”, suggesting some kind of nightmarish scenario in which you dream of yourself clothes-free in the middle of a supermarket. But, of course, it’s a way of stripping down ID technology to use unique physical characteristics to identify an individual and clear them for payment or access.

“People are only going to get more accepting of biometrics,” says Stefan Persson, chief executive of Precise Biometrics, a leading developer of fingerprint identification software, citing growing acceptance of using mobile phones for payments as a pointer to the future.

So it’s goodbye to those pieces of plastic that pack out our wallets, get put through the washing machine, get lost, skimmed, stolen

or sucked into an ATM. The card will go the same way as the cheque. Farewell to the PIN code, password amnesia or having to recall the name of your first pet or what you bought last Wednesday at 3.46pm. Well, maybe.

It all requires baby steps to ensure consumer confidence doesn’t erode

“Over time that does seem likely,” says Mark Nelson, senior vice president of open banking for Visa. “But it all requires baby steps to ensure consumer confidence doesn’t erode.” A Visa study last year

found that consumers expressing confidence in using biometrics as a secure form of authentication is up to 84 per cent, compared with 59 per cent the year before. Visa is now working on a system to help banks incorporate biometrics into the ecommerce checkout process.

Alan Goode, founder of cybersecurity analysts Goode Intelligence, says: “There’s strong movement towards biometrics because it cuts out a lot of friction now in the system.

“There’s a lot of action in this space, but widely different models and rates of adoption. There’s a lot of work on the ‘Martini principle’: being able to make a payment any time, any place, any where. And only biometrics allows that. Cards just don’t.”

Certainly there are concerns about going full-on biometric, for consumers and for retailers alike. Biometrics will potentially offer retailers a great deal more information about their customers, enabling them to create more bespoke experiences for them. It will help with other processes too, such as age verification for example, which will save time and costs. Biometrics might combine event ticketing, payment and identification in one fell swoop.

While through facial recognition systems, already in use in China, biometrics might offer that naked



01 Students of Copenhagen Business School using Fingopay’s vein recognition technology, in collaboration with payment provider Nets, to pay for food and drink at their self-service canteen with just a touch of their finger

02 Consumer trust could be a major obstacle, with card payments still seen as more secure than biometrics

experience, consumer convenience may also prove a downside of the technology to high-end retailers, for whom customer interaction is crucial to sales.

Implementation of the most seamless of biometric payment systems will cost money too, for retailers, for ATM and mobile phone manufacturers, even for online shoppers at home, as the hardware won’t be free. “So it’s a question of impact; the cost of deploying it,” says Mr Nelson. “What’s in it for the merchant? An improvement to the consumer experience will have to be very clear.”

Consumers, of course, will certainly have to adjust to biometrics’ new dynamic too, involving

a potential loss of privacy and sense of being monitored. After all, if there are already biometric systems that can identify an individual through their unique physical characteristics, such as their fingerprint or iris scan, both perceived as the most trustworthy, veins and face, ears and even heartbeat, all of which continue to advance, the hot topic now is their behaviour biometrics. That’s the measure of identifying patterns in human activity: the way a person walks, the way they use a computer mouse or type on a keyboard, the way they hold a phone.

“It’s the cutting edge of making biometrics frictionless, collecting these datapoints on consumers in

the background and scoring them. And the reality is that if banks and other financial institutions see this as a means of doing the heavy lifting to detect fraud, they'll use it because creating the best user experience is what everyone is chasing now," explains David Vergara, head of security product marketing for OneSpan.

"But it's key to note that all the other variables will need to be used too. What there will be is a layered approach because none of these biometric techs can be an island of authentication in itself."

It may be some time before, as Mr Vergara puts it, "we're into *Minority Report* territory" with people themselves being chipped, with so-called continuous authentication the norm, and artificial intelligence and machine-learning being an inevitable part of the mix. But even now biometrics has shades of Big Brother. Will the consumer accept this over the relative anonymity of a bank card, however Luddite using one might come to be seen?

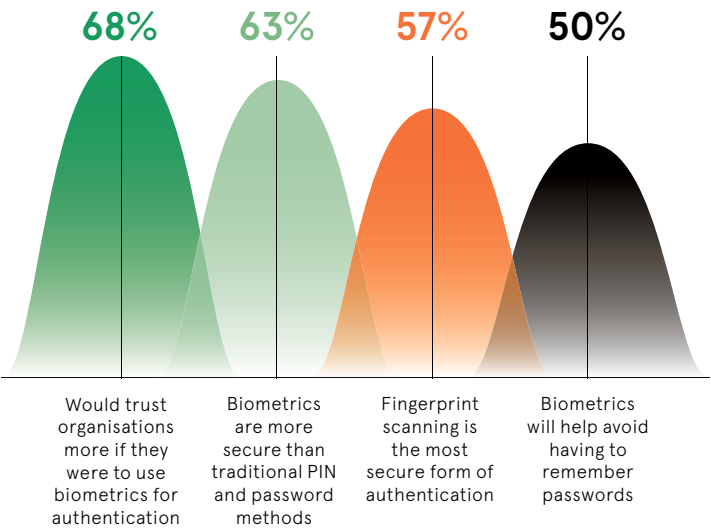
"There are some concerns about bringing in biometrics for payments, especially after recent instances of social media companies misusing data," says Mr Persson. "The customer will have to be comfortable with the use of their data. They will have to make a choice to accept it and each consumer's data will have to be handled as an individual case because when it is used it's likely to be in complex ways in the background without the consumer's involvement."

"And, of course, we will see people declining to provide their biometric data and preferring to continue to use a some kind of payment card. Helping them see the security advantages of biometrics is a big challenge for the industry."

Security will certainly see an all-time high through biometrics. Mr Persson talks of the further possibility of various datasets being cross-matched so that, for example, a payment authorised via biometrics could be checked against the payee's

Attitudes toward biometrics

Survey of consumers across seven European countries



Unisys 2017

location, as identified through their mobile phone.

But for some consumers this may prove too invasive. All the more so when payment cards are already very secure, with fraud rates low and consumers having zero liability anyway. Visa's survey found 71 per cent of consumers express confidence in the security of cards, only 13 per cent short of that expressed in biometrics. Rather, the payments industry will most likely have to sell biometrics on convenience first.

The fact is that biometrics can often verge on the creepy

Mr Goode observes: "With each level of biometrics, there will always be the question, 'Is this useful or is this creepy?' The fact is that biometrics can often verge on the creepy."

And Mr Nelson adds: "After all, the way you use a card to pay at a

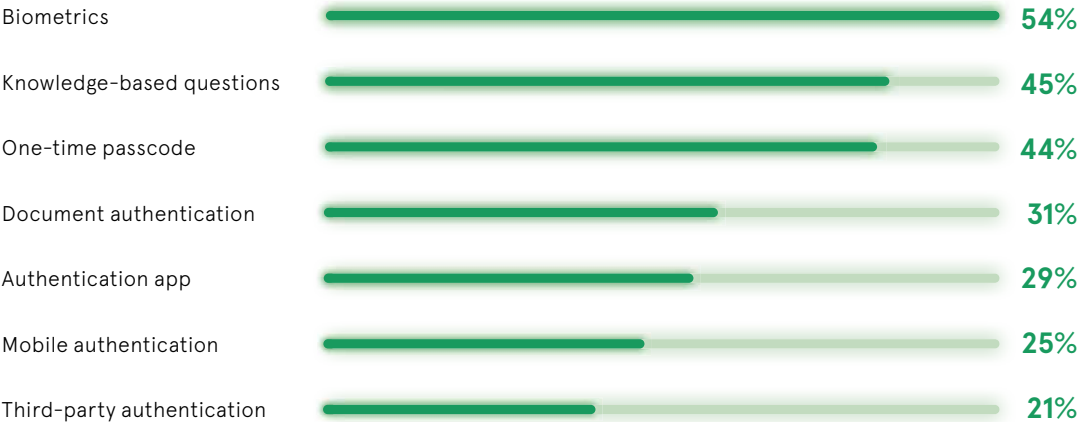
point of sale, especially contactless, is already pretty convenient. Getting consumers to change habits isn't easy. Everyone in the industry seems to be waiting for that leap in experience that biometrics might enable. But getting to the scale of current card use will take time."

Indeed, it's not all over for the card and PIN code, or at least not yet. At least, in the medium term, there will remain a place for a new generation of card that incorporates biometrics. We may well see such cards, eliminating the use of a PIN and with no limits on contactless spending, introduced as an intermediary step.

Besides, there is the industry's readiness to overplay just how quickly biometric payments, while widely considered inevitable in the long run, will actually become typical. "At best you'd have to be cautious to call the death of payment methods we commonly use now, like cards, much as cards were predicted to bring the death of cash, which clearly hasn't happened," says Mr Goode. "Five years ago, payments by mobile phone were widely predicted to take over. And that hasn't happened either. But it is a question of time." ♦

Opinion on digital identification methods

Percentage of Americans who believe the following are either very or extremely secure



IDology 2018



RELIABLE
People

SECURE
Technology

INTELLIGENT
Online payments

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Thoughtful innovation: What's next for the payments industry?

In a rapidly evolving world, payment systems must meet the challenge of agile development without sacrificing the trust and stability upon which the industry is built, says leading payment systems provider **Vocalink**, a Mastercard company

From cash and cheque to chip and PIN and contactless, the payments landscape has changed dramatically over the past 50 years. Where once consumers had little choice in the options available to them, the near ubiquity of smart devices coupled with a wave of innovation has created growing demand for new ways to pay.

Speed, convenience and ease of use are now considered standard requirements when it comes to making payments, as Gregor Dobbie, UK managing director at leading payments technology provider Vocalink, a Mastercard company, explains.

"In the past, access to payments systems had been fairly limited, but the introduction of a range of new financial institutions and other payments providers into the market in recent years has transformed the status quo," he says. "We now have far more compelling, competitive solutions, which not only meet, but drive evolving customer needs and expectations."

One of the biggest payment transformations of the past decade has been the introduction of contactless, with almost two thirds of people in the UK now choosing to "tap and go". For the first time in history, card payments overtook cash as the payment method of choice in 2017.

The appeal of contactless is easy to understand; in an age of rapid technological change where everything is

expected almost immediately, it is a natural progression that money has merged with digital formats to redefine the payments experience.

After all, many of us run almost every aspect of our lives using our phones, including for payments and banking. And as the appetite for faster, more secure and flexible payment opportunities gathers pace, arguably the biggest disruptor will continue to be real-time payments.

According to Mr Dobbie: "The culture of instant fulfilment, which we see across so many other aspects of life, has naturally made its way into the payments industry. This global shift towards real-time payments has been one of the most exciting developments of the past decade.

"Instant payments can offer greater security, more visibility around payments and therefore tighter cash management, and a lower risk of failure."

The potential for real-time payments is vast, including peer-to-peer, business-to-business and e-commerce. Examples where it can have a significant impact include insurance payouts, quicker access to approved loans, and payment of daily and weekly wages. The key to its success, as with any new technology, is ease of use.

Mr Dobbie explains: "Contactless and real-time payments have been groundbreaking in their nature, yet simple in their premise and intuitive in their use.

As the industry continues to evolve and innovate, its solutions must remain easy to access. Anything too onerous runs the risk of failure."

But as with most things, the simplest and most logical innovations are often the most complex to implement. New technology must strike a delicate balance between offering new and exciting opportunities, and seamlessly improving the customer journey with the utmost importance placed on always protecting and continually investing in the critical, national structure upon which so many are reliant every day.

It's important that our technology serves economic and social good

This controlled approach is what Vocalink refers to as "thoughtful innovation". It begins with a requirement for open communication throughout the financial ecosystem of clearing house, schemes, regulators, technology providers, payment service providers and banks. And it requires a willingness from all parties to work towards one unified vision.

Open banking driving innovation

This need to work together to benefit the end-user will only grow more pertinent with the advent of PSD2, the European Union's revised payment services directive. Under the new rules, banks are required to open up their APIs (application programming interfaces) and customer data, with explicit customer consent, to regulated third-party companies. The proliferation of new players will create a sea-change for banks in Europe, introducing a new, more competitive playing field and fostering innovation on an unprecedented level.

This will undoubtedly present challenges for banks, not least the possibility of losing customers to third parties. But it also presents banks with an exciting new opportunity to retain, win and better serve their customers.

Mr Dobbie says: "Open banking means customers will no longer be tethered to their account-holding bank. It will make the industry more competitive, but it will also drive a faster pace of innovation, which will be great news for users. We will likely see more banks create their own digital offering, and there will be greater collaboration between the banking and fintech sectors to create engaging and customer-centric services.

"We are already working hard on improving the end-user experience in the open banking environment, relating to both payments and

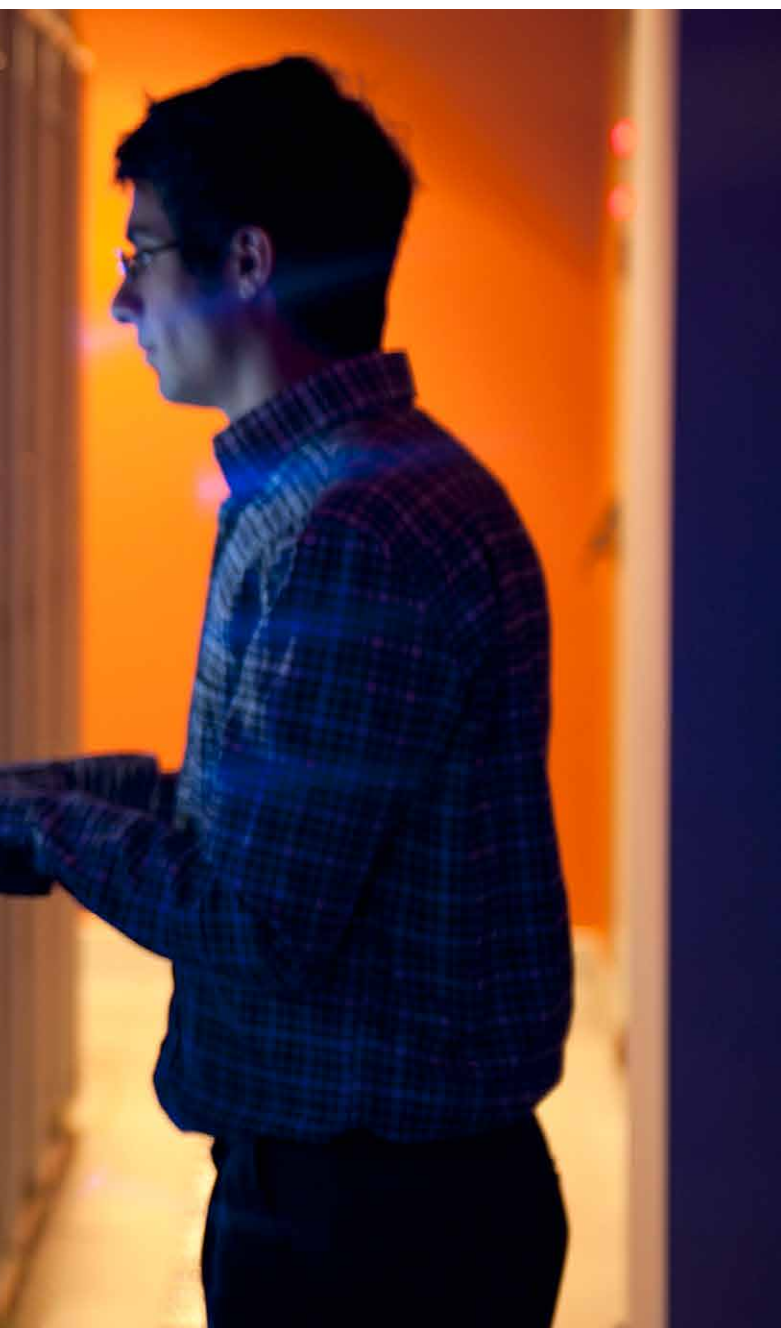
information access, and look forward to rolling those out as the services and ecosystem evolve."

However, with increased innovation comes higher volumes of payment activity and the rising need for even greater protection. Vocalink has developed AML Insights, which has the capability to trace stolen and illicit funds, disrupt organised criminal-network activity and stop it in its tracks. This groundbreaking solution will deliver a significant step-up in fraud decision analytics to complement banks' existing methods.

Not surprisingly, against a backdrop of growing innovation, security and customer centricity have become the leading watchwords.

According to Vocalink, a key step-change that will further improve the customer payment experience will be an image-based cheque clearing system, that promises to significantly reduce the waiting time for funds to clear. It is a process that is likely to prove particularly transformative for small businesses.

Mr Dobbie explains: "There's a saying that small businesses can often only be two weeks away from bankruptcy and this innovation will allow for much faster crediting of cheque payments to accounts, enhancing a business's liquidity and visibility. It's about providing customers with greater choice and flexibility, and seeking to introduce new methods of payment that solve a specific problem."



21

banks have already signed up to the real-time payments service PromptPay

631m

real-time payments have been processed

44.5m

of the 68 million Thai population have registered for its services

Innovation for social good

For Vocalink, developments in payments innovation should also have societal benefits. There remains an estimated two billion people in the world who don't have access to a bank account and this runs the risk of exclusion from society.

To address the problem within Thailand, Vocalink built and launched PromptPay in early-2017 enabling the country to enter the world of real-time payments for the first time. Its success has been unparalleled,

empowering Thai citizens to make instant payments and access state benefits in real-time.

Mr Dobbie says: "This milestone is significant in the country's bid to address financial inclusion and support the expansion of Thailand's burgeoning digital economy. It's important that our technology serves economic and social good."

In the UK, Vocalink has facilitated a service with the Post Office to enable people to transact locally as if they were using a bank, in light of the recent trend to review the number of bank branches.

Mr Dobbie concludes: "There was still a requirement in some communities without access to a bank branch to be able to transact locally. For us, it's about enabling the technology we have to allow people, especially vulnerable people, to bank the way they want to."

While regulation and technology have a powerful role to play in innovation, customer experience and enhancing the customer journey will undoubtedly be the real competitive differentiator as we enter a new era in payments.

For more information please visit www.vocalink.com



Q&A Payment platforms launch innovation

Paul Stoddart, chief executive of Vocalink, a Mastercard company, tells how payment platforms are benefiting customers worldwide



Why should governments, businesses and consumers care about payment platforms?

Payments are a fundamental enabler for everything we do, from business to the way we conduct our personal lives, and have become a critical part of the financial ecosystem. Importantly, no two needs are the same and that's why the design and delivery of a national payment platform is so important for governments, businesses and consumers alike.

It's about ensuring that everyone's needs, across all the various demographics, are met by the solutions we bring to market. The rapid adoption of technology has proven extremely powerful in making sure payment platforms are accessible to people across all areas of the globe. It's also helped to meet growing consumer demand for certain processes to become digitised. Payment systems need to be fit for purpose and their design needs to reflect the changing times.

For governments, payment platforms will enable them to achieve their macro goal of reducing cash in society. Many central banks view the cash economy as expensive, inefficient and susceptible to financial crime. Our job is to ensure that payment platforms support both the customer pull and the regulatory push.

Who is leading the way in payments innovation?

There are various key players helping to drive forward innovation. Banks are great champions for innovation, as part of their goal is to increase engagement and interaction with their customers. Technology enables them to do this, as well as bringing new, targeted services to market. Overall, the financial services sector has been extremely supportive of innovation in payments, and is seizing the opportunity to create new revenue channels and streamline costs.

Payment system technology providers such as Vocalink are a crucial part of the equation. We are active in more than 200 markets and the power of that network is substantial. By bringing together our capability with Mastercard's, we are able to drive innovation globally. The fintech community also has a leading role to play in enabling innovation to move from lab to mainstream. They make it accessible so people around the world can leverage developments in the most simple, efficient way.

It's about ensuring that everyone's needs, across all the various demographics, are met by the solutions we bring to market

How can payment platforms benefit the developing world and poorer societies?

The two greatest benefits offered by payment platforms are access and inclusion. Despite advances around the world, it still remains difficult for many people to participate in the economy. Without a bank account or the facility to make payments, there's a very real risk people will become excluded, and this is why developments in technology can have such huge social and economic benefits.

We also need to consider the identity factor. Being able to participate in a payments system supports identity management and helps people create a profile, which is both useful for their own future needs and for governments.

An example of this is Vocalink's launch of PromptPay in Thailand, which

has enabled the country to enter the world of real-time payments. Since it launched at the start of 2017, 21 banks have signed up and 631 million real-time payments have been processed, with the Thai government as a primary user. Even more impressive is that 44.5 million of the 68 million Thai population have registered for its services. Its success marks a huge milestone, not only for Thailand but globally.

What are the risks and barriers associated with new payment platforms?

As with the implementation of any new technology, the biggest risk remains cybersecurity. We invest in the most robust and advanced defences to protect our technology and services, but in a connected world security will always pose a risk.

In terms of barriers, the greatest hurdle is ensuring host countries have the adequate infrastructure to support payment systems. That includes good power, communications and datacentre availability. Without this, it can become very difficult to implement a successful payment platform.

How do you imagine a future driven by new payment technology?

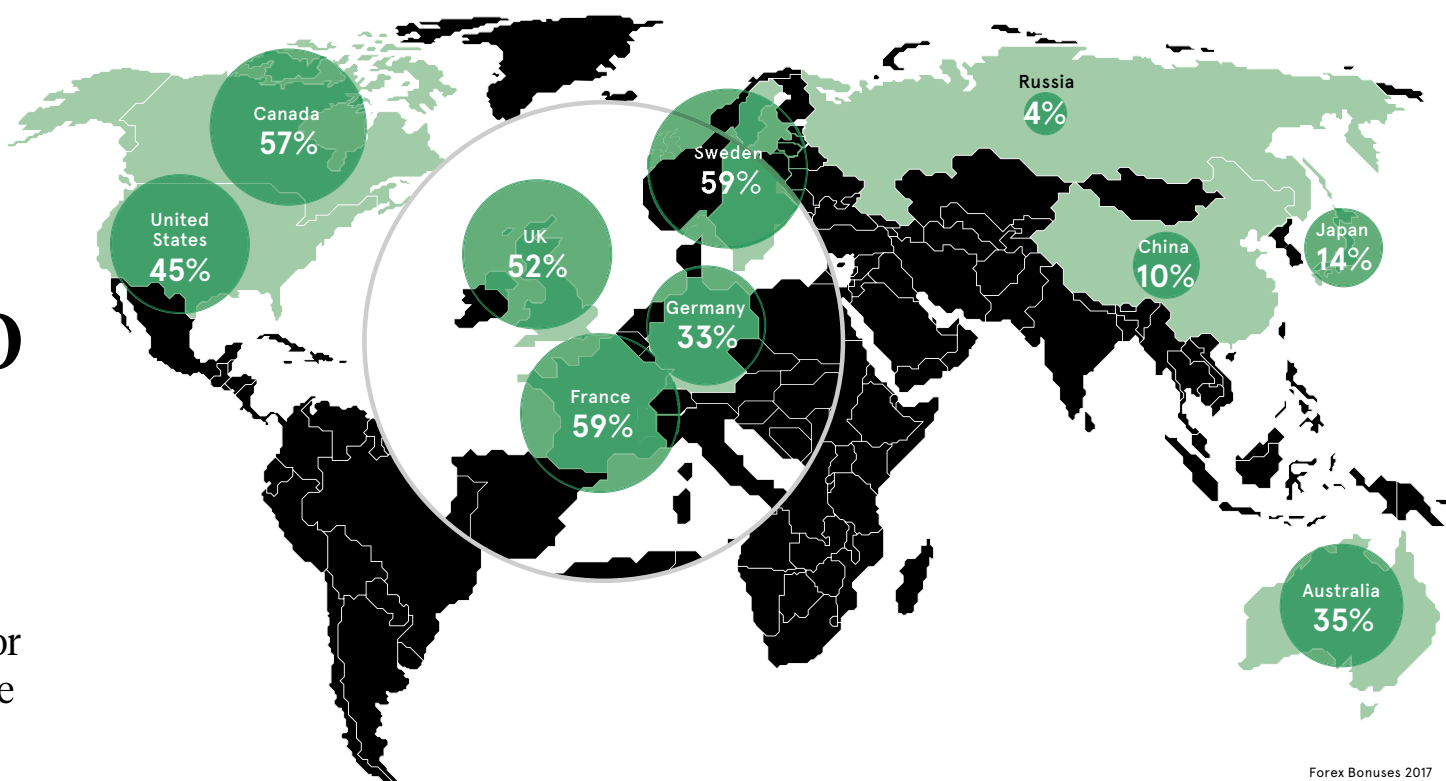
The connection between bank accounts and identity is only going to grow in significance going forward, and I believe that a critical element of payment technology will be the ability to identify people robustly.

As a provider of payment services, we also need to be able to look towards a future where different forms of payments and means of exchange beyond fiat currency will become the norm. Cryptocurrencies will play a role to a certain extent, but we must be open minded to assets such as personal information and data being exchanged.

In a world of global trade and cross-border payments, our job will be to build a system that can assess the value of something and enable a trade to take place in which a part or all of that payment will not be in today's traditional form. There are exciting times ahead.

Cashless consumers

Percentage of consumer payment transactions using non-cash methods



Forex Bonuses 2017

Tapping into new ways of banking

Innovation in the payments sector is driving change elsewhere in the UK economy and beyond

MARK FRARY

When the Oxford English Dictionary announced in 2016 that fintech was officially a word, it signalled the future of payments was finally here.

While innovation has always happened in the payments sector, it had suddenly become mainstream.

There has certainly been a very public revolution in payment methods in the years since the mid-noughties, when the UK was introduced to chip and PIN.

Chip and PIN became a huge success story for the payments industry. In the ten years after it was introduced in 2004, annual counterfeit card fraud losses fell by £81.9 million. Three years later came another revolution in the form of contactless cards, where the process was made even easier by removing the need for customers to enter a PIN.

Technologies such as chip and PIN and contactless come under the umbrella of EMV cards, the initials referring to the founding members – Europay, Mastercard and Visa – of the organisation that defines the standards which have underpinned this revolution.

EMV has been a major success. By the end of 2017, 54.8 per cent of all cards issued globally were EMV.

Much of the rationale for the introduction of EMV cards was to reduce fraud. So has it worked?

Certainly, initially fraud from counterfeit and lost and stolen cards fell. But the incidence of fraud on lost and stolen cards has increased dramatically since. In 2012, the number of accounts defrauded was 113,162; in 2017, this figure was 350,066, according to UK Finance, the trade association for the finance and banking industry.

The growth in fraud may be down to problems with the EMV protocols themselves. In 2010, researchers at the University of Cambridge demonstrated a so-called man-in-the-middle attack which showed how someone could use a genuine card to make a payment without knowing the card's PIN.

Yet this headline figure does not tell the whole story. UK Finance says that while the number of accounts being targeted has grown, losses have actually fallen by 4 per cent.

Payment innovation has brought benefits through lower fraud and, more importantly, customer satisfaction. Customers love the ease with which payments can now be made; London's transport network is a good example of this.

The ability to satisfy regulator demands, while moving at the pace of the fintech community, has always been a challenge

Transport for London (TfL) launched the prepaid Oyster card in 2003 to replace printed tickets, but the launch of contactless cards presented a new opportunity. In 2014, TfL enabled commuters to use contactless and by last summer more than two million journeys were being made using contactless every day.

"In TfL you have a large organisation that had key benefits they were looking for – reducing the cost of carrying cash in the ecosystem and the way

that cash created queues. They realised that by creating a better customer experience they could deliver the benefits they wanted," says Jonathan Vaux, executive director of innovation partnerships at Visa in Europe, which was involved in the project with Barclays.

Despite the UK's love affair with EMV payments, there are wide international differences in adoption. In western Europe, the figure is 84.4 per cent; in the United States it is now 58.5 per cent. In terms of transactions, almost two thirds of card-present transactions globally are made using EMV cards.

These differences have a number of causes. "It may be due to consumer behaviour or the margins in different markets. For example, in Europe margins are such that managing fraud carefully is really important. Other markets have different risk appetites," says Mr Vaux.

TfL has benefited from fewer queues and the ability to introduce innovative products, but other businesses also have potential to benefit from payment innovation.

Psychologists have shown that people spend more when transactions do not involve physical cash. Dr Priya Raghuram of New York University says: "Less transparent payment forms tend to be treated like 'play money' and are hence more easily spent or parted with."

Many music festivals have taken advantage of this and use RFID (radio-frequency identification) wristbands for payments, increasing visitor spend by up to 30 per cent. Disney and Universal have also successfully introduced wristbands.

One fintech company wanting to innovate is Starling Bank, which is offering real-time payments to individuals and businesses.

Julian Sawyer, the bank's chief operating officer, says: "Payments have

been owned, managed and delivered by a few big banks that haven't brought much innovation into the market."

Real-time, frictionless payments have the potential to change things. "If you can pay your staff or your suppliers quickly, people are probably going to say they prefer working with you," says Mr Sawyer.

Starling is also innovating with the idea of banking as a service. "Why is it only a few banks and a few large corporates who have access to payments? You can create a banking product that is regulated and you can have access to payment, but we can give other people the job of acquisition and the customer experience. A university could create an account for each student with an account number and sort code," he says.

Mr Sawyer also sees advantages in just-in-time manufacturing

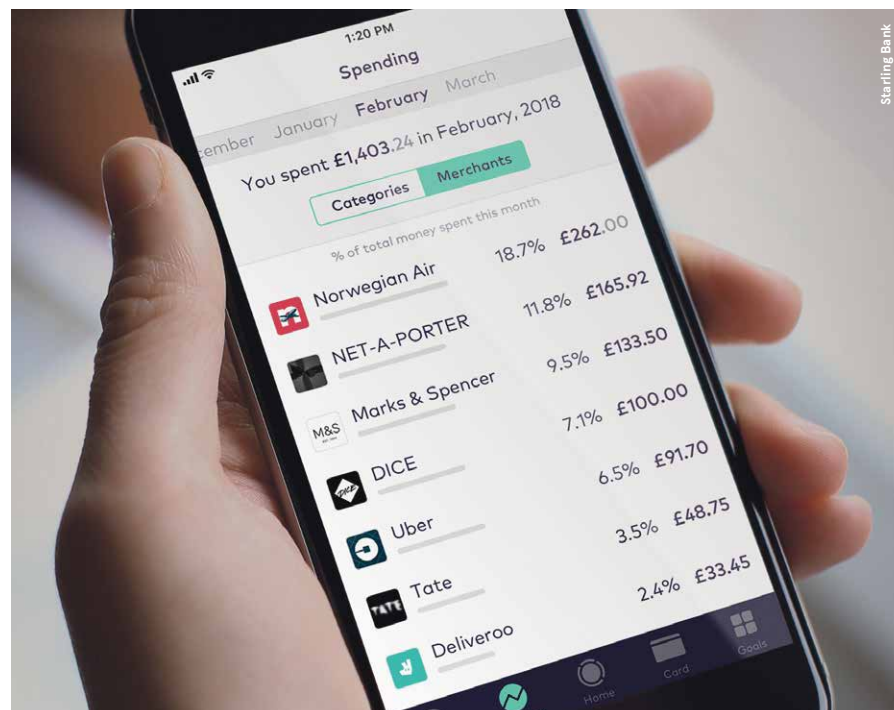
settings, such as at a carmaker where everything arrives just before it is needed. Payment can flow in the same just-in-time way, keeping the supply chain alive.

How can you bet on the right technology? "We start by recognising that not everything is going to be successful. It is a process of trial and error, and that nothing will turn out exactly as planned, but working with the payments ecosystem to be flexible and adapt," says Visa Europe's Mr Vaux.

One of the barriers for new payments innovation is regulation, particularly in Europe. Mr Vaux says: "The ability to satisfy regulator demands, while moving at the pace of the fintech community, has always been a challenge; the speed of technological changes is so rapid."

Fintech's rapidity means the future is an exciting one. ♦

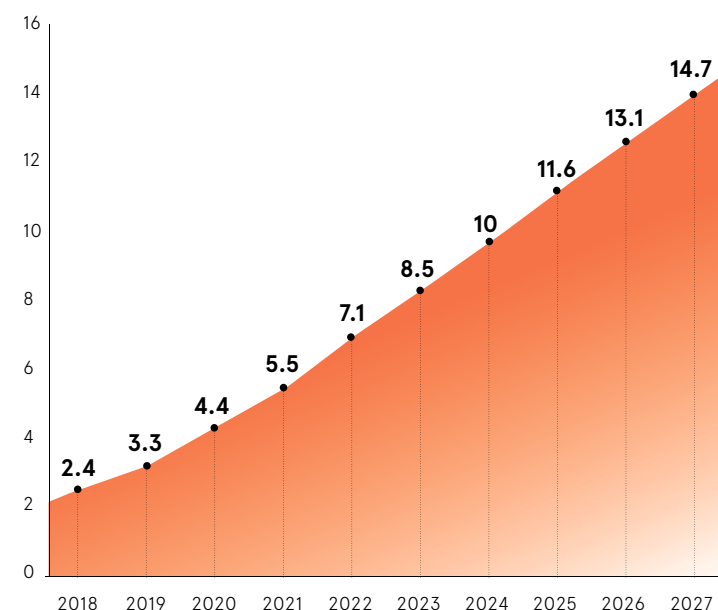
Starling Bank is offering real-time payments to individuals and businesses





Contactless/dual interface card projections

Forecasted number of cards in circulation worldwide (billions)



Edgar, Dunn & Company – Advanced Payments Model 2018

Biometrics will be at the heart of the global contactless push

The easier it is for consumers to pay, the more likely they will complete their purchases. Biometric payment cards with fingerprint recognition allow what was previously impossible – cards that are ultra quick to use, yet have powerful security

Consumers have multiple payment options, from cash and cards to phones and mobile wallets, QR codes and peer-to-peer (P2P) payments. Cards and digital payments focus on convenience, yet PIN codes and passwords often slow down transactions and frustrate buyers, and contactless payments can only be made up to a certain value which varies by market.

People are looking for faster, easier purchasing, yet at the same time they are also becoming much more discerning about security. This has been perceived by the industry as a problem; convenience and security have often run at a tangent. By better securing fast contactless card purchases, the payments industry can solve the challenge and they can also raise transaction limits.

Contactless adoption, which has lagged in markets outside the UK, has become a core part of card and bank strategies that attempt to improve the purchase process. An A.T. Kearney report forecasts US banks alone could generate \$2 billion in extra earnings over five years with the technology, aside from the huge benefits to retailers.

Biometrics is transforming this area, by identifying consumers and enabling the elimination of passwords, PIN numbers and low transaction limits. Simple fingerprint recognition allows consumers to touch the sensor on the card and instantly conduct the transaction the same way they are used to with their contactless card, without

worrying about any transaction limit except their own credit allowance. At the same time, they have the peace of mind that others cannot take their card and go round stores using it.

Consumers are accustomed to biometrics technology, already using it to log on to their smartphones or make payments on them, and they are demanding this functionality on other common devices, including their debit and credit cards. In addition, governments and regulators are promoting biometrics as reducing fraud and identity dangers.

Such increased use of biometrics in everyday life is normalising the technology and reducing any consumer concerns about changing habits. Card issuers such as Visa and Mastercard see the technology as the next generation of security. A Visa survey found in the United States 67 per cent of consumers are interested in fingerprint recognition for payments because it is easier and more secure than passwords and PIN numbers.

As cards overtake cash as the most prevalent form of payment in many markets, biometric cards are expected

to take centre stage. This will happen in part in the context of smartphone payment apps, smartwatch transactions and P2P taking some time to achieve critical mass, and then when widely adopted creating further consumer desire to use similar technology on all their cards.

Banks, card issuers and retailers have begun a number of biometric payment card tests. "Initial feedback from the pilots is positive and now there is a race among many firms to be first in offering the product," says André Løvestam, chief executive of biometric authentication firm Zwipe. More pilots are expected in the coming few months, with a wide roll-out of the cards from 2019.

According to analysis undertaken by Edgar, Dunn & Company, the total available or addressable global market opportunity for biometric cards is projected to be around a billion cards by 2023-24. Biometric payment card growth is likely to be fuelled by markets in Asia followed by Europe, Latin America and North America. The addressable or available market opportunity represents the total number of cards that could potentially be converted to biometric payment cards.

Issuers can increasingly see the opportunity to generate more revenue, with increased transaction volumes and reduced losses from fraud, as well as improved customer experience, according to the analysis. "The core elements of having a mass market-ready biometric payment card are that it can be compatible with the existing payments infrastructure, work in both contact and contactless mode, and function without the need for a battery or fixed power supply," says Mr Løvestam. "Our unique technology platform is at the heart of this innovative mix."

As work progresses among banks and card manufacturers to develop biometric payment cards in collaboration with Zwipe, biometric sensor manufacturers see the huge opportunity on offer. Faced with increasing

competition and price pressure in the mobile phone marketplace, they have refocused their efforts to offer sophisticated sensors for payment cards.

"For all parts of the payments ecosystem, the value proposition of biometric payment cards is simple: eliminating the unnecessary trade-off between convenience and security. Banks, card issuers and retailers can see how these cards will further cement such confidence," says Mr Løvestam.

There is also the opportunity for banks and card firms to build more sophisticated custom products, a particularly important aspect in developed markets where differentiation is evermore important.

Examples of this already exist, with challenger banks in Europe developing services that combine personalised banking with unique cards that consumers can pick and choose themselves, and each has different costs and pricing models.

Meanwhile, in developing markets the fast growth of cards offers a major opportunity to leapfrog older cards and move straight to biometric technology, similar to systems already widely used by governments to deliver services more efficiently.

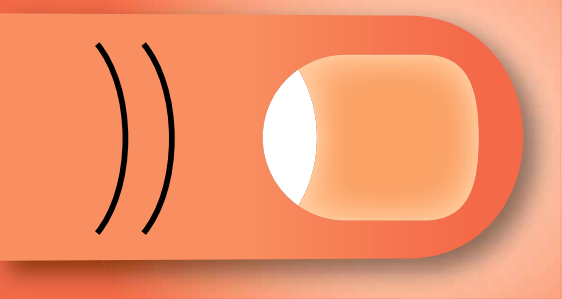
Competition among banks and card issuers has never been more intense, and biometrics offers a strong route to success. And with banks increasingly moving away from physical branches, making the most of consumer touchpoints with improved experiences has ever higher importance. Biometric payment cards offer a resilient system that can enable card issuers to establish a top-of-wallet, top-of-mind position among consumers.

To find out how biometrics enable fast, secure, high-value contactless card payment please visit [zwipe.com](https://www.zwipe.com)



André Løvestam
Chief executive, Zwipe





MOBILE MONEY

The battle for digital wallet supremacy is hotting up between tech giants as consumer take-up surges. But while the market continues to grow, especially in countries such as the United States and China, there are still barriers standing in the way of adoption

29%

of smartphone owners say they are likely to use mobile payment apps over the next 90 days

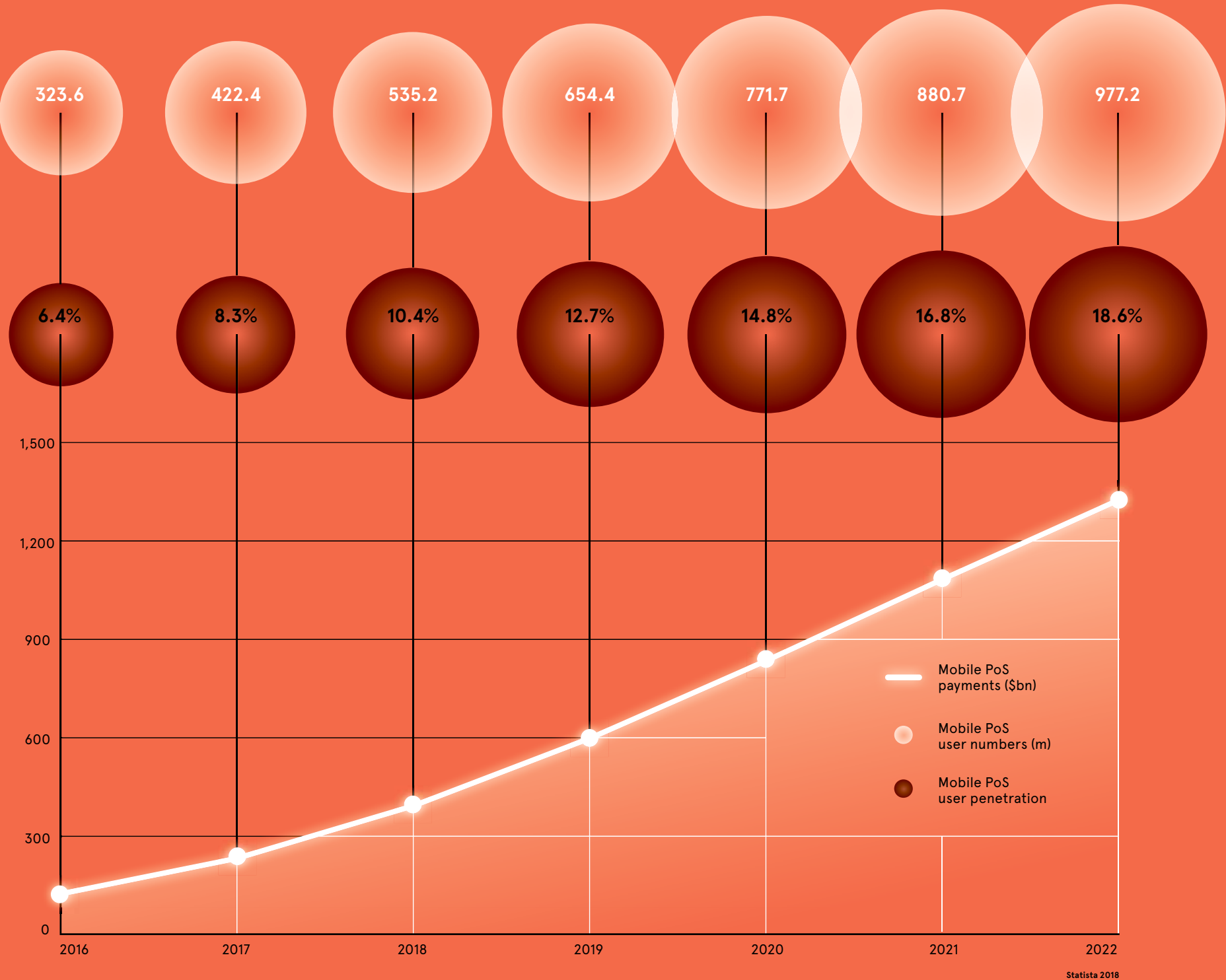
35%

say the ability to receive discounted offers on products and services via a mobile wallet would encourage more usage

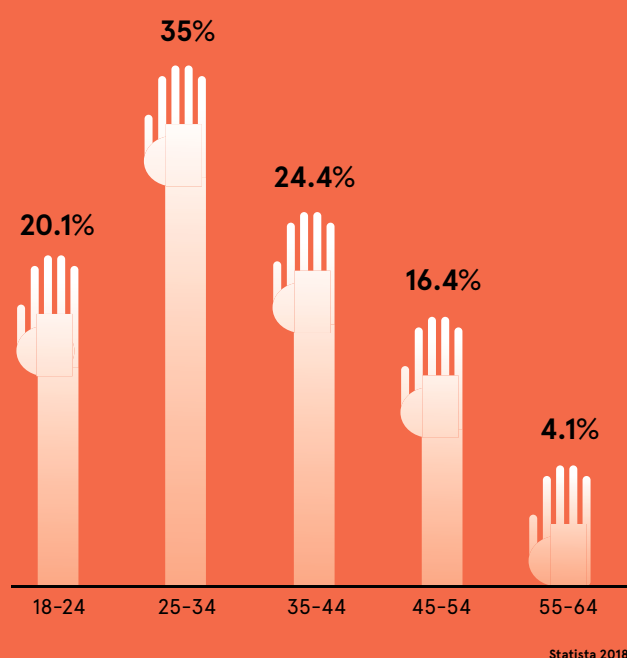
451 Research 2017

Mobile wallet growth

Predictions for global mobile point-of-sale (PoS) payments and user numbers/penetration

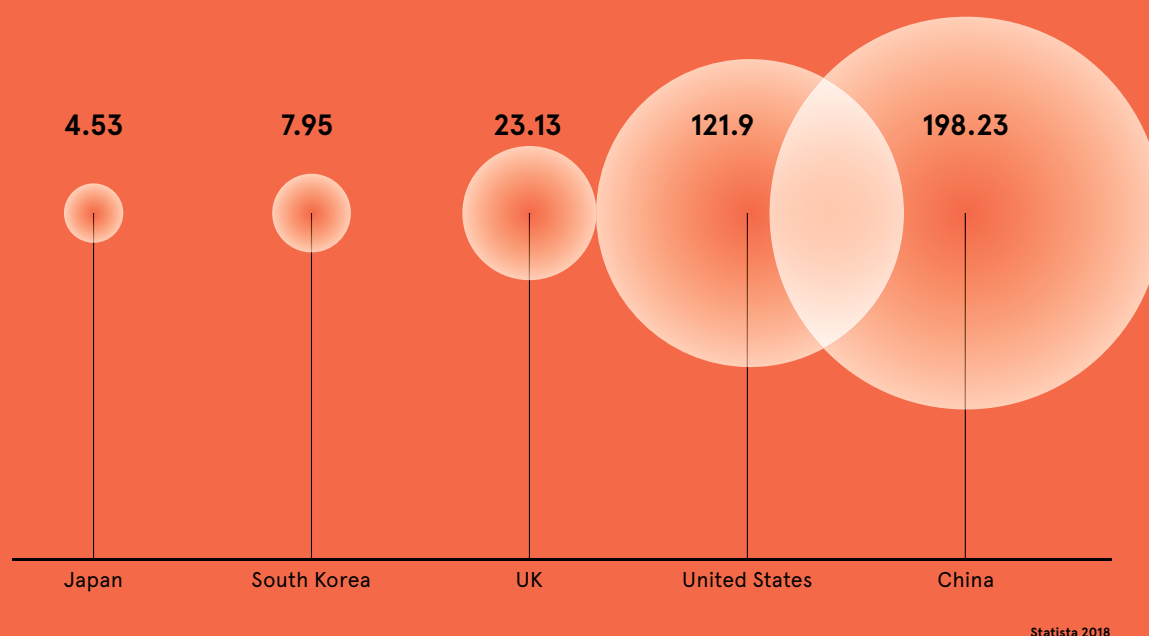


Age breakdown of mobile wallet users



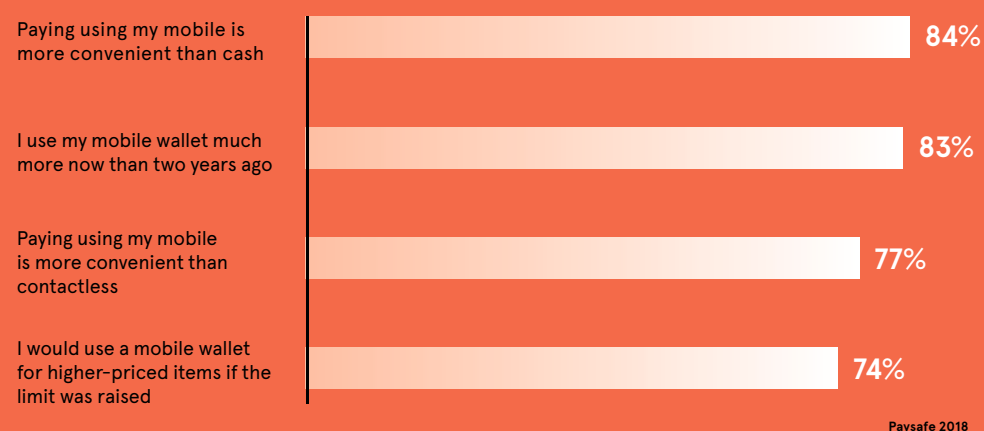
Top markets for mobile wallet transactions

Mobile point-of-sale payments (\$bn)



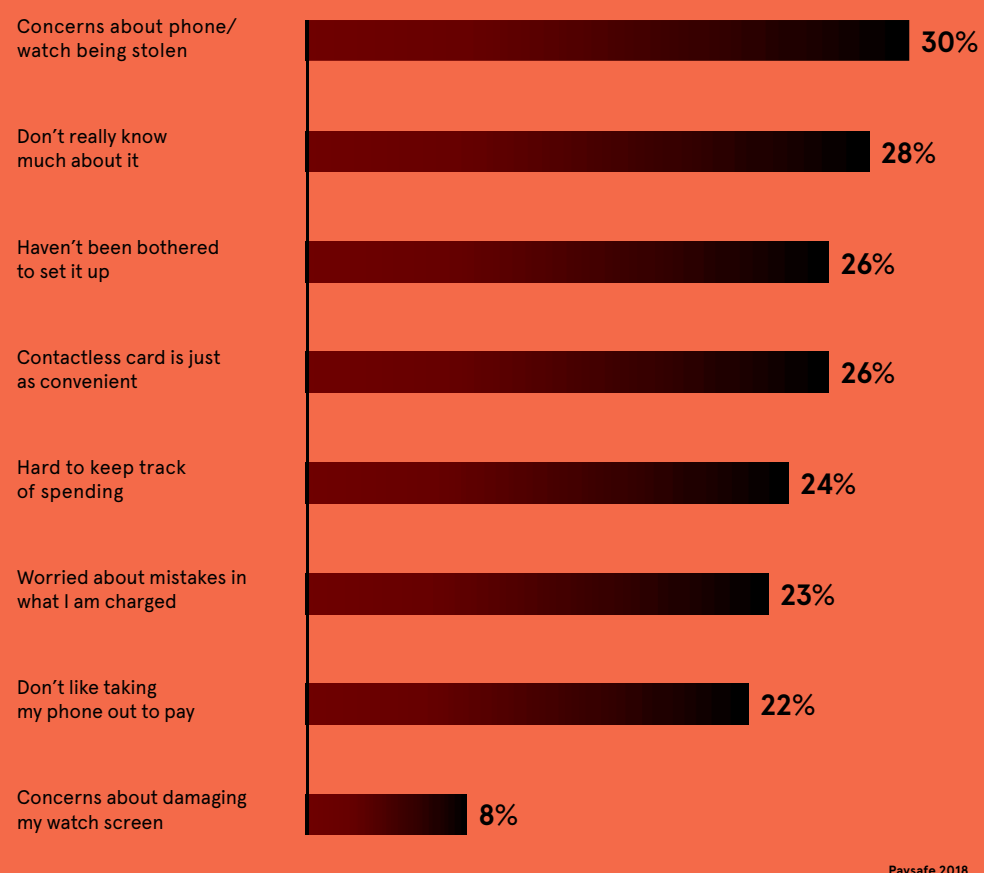
Mobile wallet adoption

Percentage of mobile wallet adopters who agree with the following



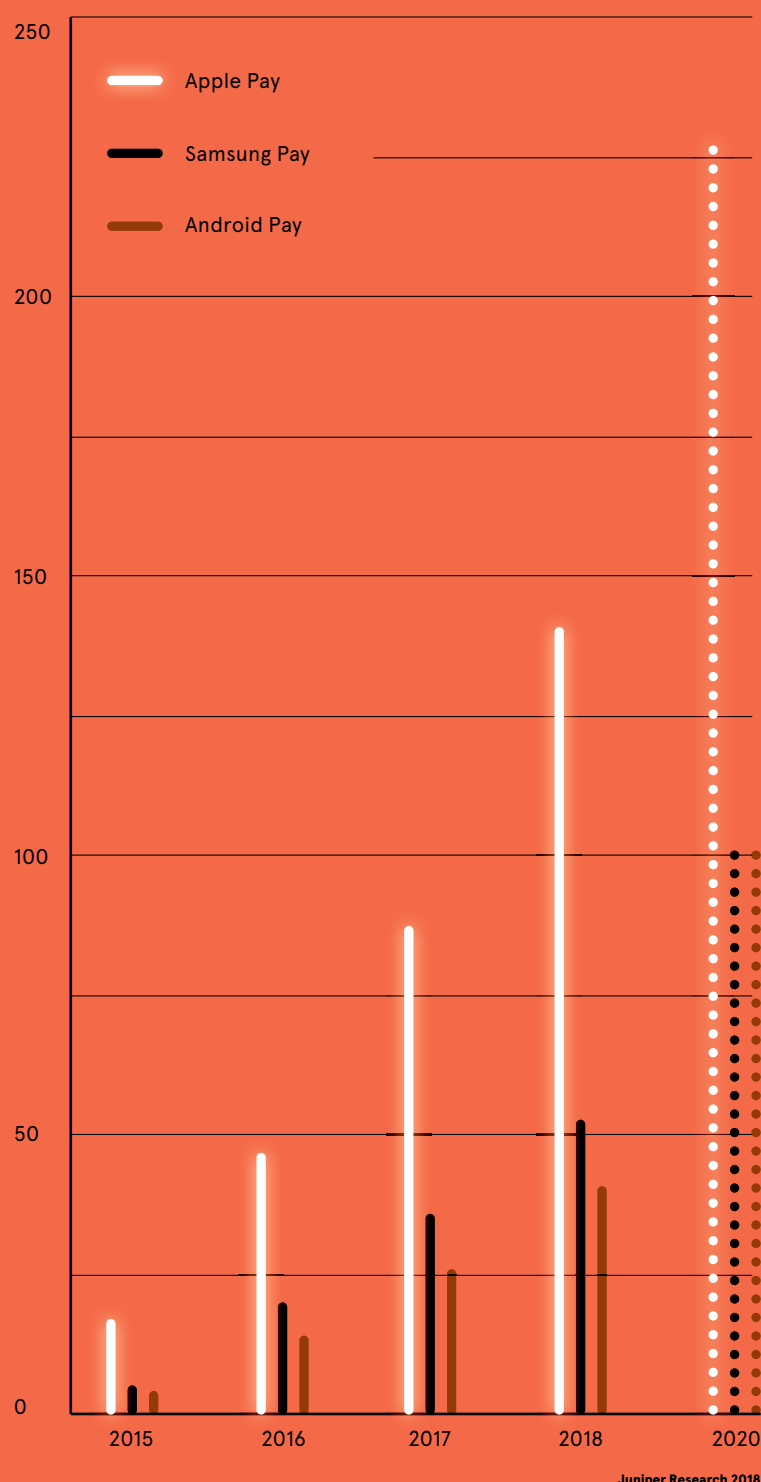
Top barriers to paying using a mobile wallet

Percentage of consumers not using mobile wallets who agree with the following



Battle for mobile wallets

Number of users of Apple, Samsung and Google contactless payments (millions)



Reward for playing your cards right

Becoming consumers' default payment option, particularly in digital wallets, is an increasing challenge as incumbents and newcomers alike try to keep pace with developments in technology

LAURA OLIVER

It's convenient, quick and simple: having a default card that can be automatically used when you next shop online or pay a regular bill makes a consumer's life much easier.

Research from Deloitte suggests this default choice already dominates online payments, and those made via apps and smartphones in shops, as 84 per cent of the digital payments made by participants in its study used this option.

The advantages for card providers of securing this position begin with interchange fees and revenue charges on transactions, but access to a rich pool of customer data is close behind, says Abhijit Deb, head of banking and financial services, UK and Ireland, for global technology consultancy Cognizant.

"They should harness this to provide an innovative and hyper-personalised customer experience, to differentiate them from the competition. The value of payments data as an additional revenue stream has not been lost on those outside financial services," he says, adding that Google recently purchased Mastercard credit card data in the United States to track customers' offline spending.

To get customers to switch their card to default, providers must compete with deep-rooted consumer behaviours and attitudes. The longer a card has been in the default position, the harder it is to get the consumer to change it, according to Deloitte's research.

Partnerships between retailers or utility companies and card providers could override this apathy. Citibank has offered Amazon discounts to customers who made its card their default choice for one-click purchasing, for example. "It's about building customer stickiness and loyalty programmes. The more that you use the one card, the more you will get those offers," says Paul Anning, partner at Osborne Clarke.

Deloitte's research shows 70 per cent of payments made digitally with a default card were for discretionary rather than regular, recurring items such as bills. Issuers could, therefore, focus their marketing and customer acquisition and retention strategies on this behaviour. For more traditional card providers, however, offering incentives to just one group risks alienating the rest of their vast customer base.

To compete in this field, card issuers must focus on the digital forces shaping default payments. Digital wallets and mobile banks, such as Monzo and Starling, and mobile payments, such as Apple Pay and Samsung Pay, have been built with gathering and analysis of customer data in mind.

They can share more insights on spending and saving, offer more personalised discounts, and build trust and loyalty by helping them navigate their finances. On the providers' side, more data analysis can improve fraud detection, which is another marketable benefit.

Card providers can use their top-of-the-wallet status to become the customer's 'digital front door' to a much wider ecosystem of services

As newer players, they have the potential to grow with their customers' needs and in response to emerging technologies, such as voice-activated assistants and increasingly frictionless payment.

Smartphones offer geolocation, which could help personalise rewards and discounts for using a default card, and increasingly the ability to identify a user optically or biometrically. Developing payment solutions in line with these existing and emerging mobile



84%

of digital transactions by volume used the default payment option

Deloitte

capabilities can offer ultimate convenience to customers, and give card providers competitive advantage in the digital wallet.

"Customers could send a picture of their marriage certificate to change to a joint account with a spouse or to update their new name," explains Nick Lincoln, partner and Europe digital consulting head, banking and financial services, at professional services firm Genpact.

"There are lots of other documentation that using the phone camera could facilitate with the real-time optical character recognition it brings. Saving time and creating an ease of use increases loyalty, and encourages customers to select them as the default provider."

Card providers can "use their top-of-the-wallet status to become the customer's 'digital front door' to a much wider ecosystem of services", says Cognizant's Mr Deb. Acting as a portal could encourage more of the same card on the same device, which generates more insight upon which providers can act, adds Mr Anning. "There's a lot of interest in building things, but it always has to match what the customer wants and help them overcome pain-points in payment," he says.

The use of default payments for online shopping and mobile payment apps and wallets is only expected to grow in coming years. Some long-standing providers, such as JPMorgan Chase, already provide customers with a mobile payment app with a reward scheme and discounts linked to repeat use. It hopes the size of its existing customer base will help it compete with the digital agility of newer players.

But, says Mr Lincoln, there is typically more talk than action when it comes to innovation. "Many organisations do not yet have the technological infrastructure and ability to test at scale to truly innovate," he says. "They're too dependent on Apple and Android Pay's hegemony, as opposed to developing their own alternative services. Incumbent and challenger banks alike must prioritise functionality and put developing technologies, such as facial recognition and biometrics, to good use for their customers to improve the future of payments."

If card providers don't integrate existing technologies and anticipate new ones, and have the analytical capacity to understand the effect these will have on customers' spending behaviour, they risk being left behind. ♦



Anthony Kwan/Bloomberg via Getty Images

OPINION COLUMN

‘The time is upon us to disrupt traditions that have held women back’

While corporate America has been making incredible strides in efforts for gender representation and equality, there is still much to be done in this arena, specifically within the financial services industry.

The Great Recession in 2008 opened many previously closed-off opportunities for women to advance into leadership positions. Despite this, we still see a substantial gender imbalance a decade later. It remains that there is not enough inclusion and diversity among these corporate cultures.

I have seen this first-hand in my own career: young women with tremendous potential don’t confidently push forward in their professional journey, but instead wait to be asked to take the next step. I watch these promising professionals fear that they will be dismissed when asking for what they want.

I also see companies leaving enormous reserves of untapped talent when they fail to foster women’s career growth early on. Their potential is left underdeveloped and underappreciated. I want to see more directness from women on their career goals and companies taking better steps to harness that power already lying within. But getting there requires a brave conversation and frank reflection.

It’s for these reasons that I’m excited to launch Rise Up, a new programme to embolden women within the financial services industry to gain confidence in their skills, stand up and be heard, and to take hold of leadership roles. This year’s Money20/20 USA event, the leading annual summit of financial technology and payments industries, will be the stage where we introduce the inaugural group of Rise Up women.

Lack of representation for women in both corporate America and the financial services industry remains a lingering problem, especially among leadership roles. In the United States, women hold only 27.8 per cent of senior-level positions in the financial services industry, according to Marsh & McLennan Companies. The figure drops to 19.8 per cent when analysing board positions and plummets to only 1.4 per cent for female chief executives.

Maintaining this imbalance causes the financial services industry to miss opportunities for significant growth. Our industry must look to the future not just for innovative

ideas, but for its next generation of leaders as well. This process includes fostering development for women. It is imperative that women be given equal opportunities and be bolstered with the self-confidence and courage to articulate their desires to advance.

According to KPMG, while 40 per cent of women consistently envision themselves in senior leadership roles, two-thirds expressed the desire to advance. That gap is concerning for not only the women themselves, but for companies overall, as there are marked advantages to hiring women in these positions.

McKinsey & Company research found a statistically significant, positive correlation between the diversity of an executive team and its financial performance. These results stated companies were 21 per cent more likely to have above-average profitability when in the first quartile for diversity than in the fourth. Championing diversity has direct and measurable impacts to companies’ bottom line.

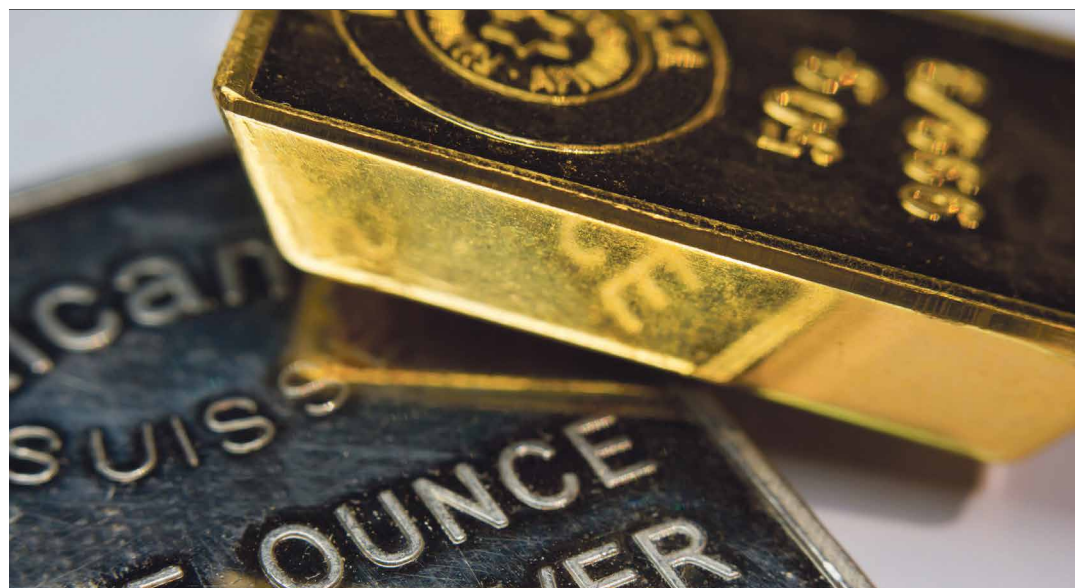
It’s for these reasons that Rise Up is not simply facilitating another conversation on gender imbalance, but rather providing a solution and steps to real-world action. Rise Up is designed to empower future female leaders, offering exclusive networking opportunities, mentorship workshops and sessions during Money20/20 USA between October 21 and 24 in Las Vegas.

The time is upon us to disrupt traditions that have held women back. It’s critical we support organisations that are already committed to diverse cultures, applaud companies giving opportunity to new voices and allow women the agency to take their own career paths in hand. I am proud Money20/20 is steering the financial services industry further in fostering future female leadership.



Tracey Davies
President
Money20/20

Commercial feature



Blockchain heralds evolution of the gold standard

What’s old is new as gold-based cryptocurrencies rejuvenate the role of precious metals as mediums of exchange, while also bringing stability to a market marred by volatility

Recent crashes in the value of the Argentine peso and Turkish lira illustrate what happens to fiat currency when people lose faith in a government or central bank. Elsewhere, Venezuela’s president recently invited citizens to invest in, and be able to purchase goods with, bars of gold in an attempt to combat the country’s hyperinflation.

In times of political and economic turbulence, it’s easy to see the sense in rolling back the years and trading or transacting with good old-fashioned precious metals that aren’t subject to devaluation by central banks and governments. With the advent of blockchain technology, the evolution of the gold standard has arrived globally.

Cryptocurrencies are not immune to volatility. The rise of digital currencies in recent years may have enabled people to transact outside of traditional banking systems easily and avoid high fees, but severe fluctuations in value have limited their use to speculative investments instead of genuine mediums of exchange.

“They’re not really being used as a store of value,” says Ryan Case, chief commercial officer at Kinesis Money. “There have been fantastic developments, but there are significant limiting factors when just considering their use as an efficient means of transaction.”

Kinesis is leading the charge in shaking up this market by using blockchain technology to reintroduce gold as the currency it once was, thereby giving cryptocurrencies the stability they need to develop into a genuine alternative to fiat money.

The digital currency was founded by the Allocated Bullion Exchange (ABX), an institutional marketplace set up in

2011 for the trade of physical precious metals, gold and silver, being two of the most stable and definable stores of value, across seven global locations.

“We’ve combined the knowledge and experience we gained from that, as well as the infrastructure we developed with ABX, with the advent of blockchain technology and the introduction of cryptocurrencies,” says Mr Case. “Doing this has given us some significant advantages against other cryptocurrencies in the gold space.”

Kinesis is a monetary system based on a 1:1 allocation of precious metals, gold and silver, offering an alternative to fiat currency whilst bringing stability to crypto currencies

“I can’t do much with a kilo bar of gold that is stored in a vault somewhere. I can’t monetise it and I can’t access the liquidity in terms of the dollar value that it represents. But we saw the introduction of cryptocurrencies, and combining a traditional asset such as physical gold with a digital currency, as a great opportunity to return to being able to transact gold easily and efficiently – using it as a medium of exchange.”

To encourage users to send, spend and transact on the Kinesis Blockchain Network, Kinesis has introduced a multi-faceted yield system that remits the 0.45 per cent it takes on each transaction back out to the network based on how they’ve participated.

For example, depositing physical gold into the Kinesis Vault Network via ABX, converting it into Kinesis currencies and then sending, spending or transacting it qualifies you for a Minter yield, while others may get a Depositer or Holder yield.

“All this is designed to bring metal into the Kinesis Monetary System and then get it moving,” says Mr Case. “We don’t want to have something that people are just holding in the way we’ve seen with bitcoin. We’ve developed this to facilitate trade.”

Kinesis opted to create a proprietary fork of the Stellar Blockchain Network to enable extremely fast transaction speeds and a truly scalable global monetary system. Meanwhile, the Kinesis debit card allows for instant conversion of Kinesis’s currencies into fiat currency anywhere in the world where Visa or Mastercard are accepted.

“Our goal is to create transaction velocity and trade volume. It really is the evolution of the gold standard. We’ve put gold and silver on to the blockchain to create cryptocurrencies that allow people to instantly and efficiently send value around the world.”

For more information please visit kinesis.money



BLOCKCHAIN



Dima Zei/Shutterstock

Can blockchain ease global payments?

Bold claims that blockchain can transform the payments industry, particularly in cross-border transactions, may soon be put to the test

NICK EASEN

Anyone who has transferred money between countries recently realises the process has evolved little in decades. Too slow, too opaque and too expensive are the gripes. This is sparking debate among banks worldwide whether cross-border payments could be faster and cheaper, more reliable and transparent, if a 21st-century digital solution was deployed.

The prize is hardly small change, global payments looks set to be a \$2-trillion industry by 2020, according to McKinsey, accounting for a third of banking revenues. And as more of us become plugged into the globalised economy, the money changing hands is set to head skywards.

Blockchain, the distributed ledger technology (DLT) that underpins cryptocurrencies, is touted as one solution. Roughly 90 per cent of top European, North American and Australian banks are experimenting with it, and recently it has reached peak hype.

The unique selling point of blockchain – that mutually distrusting parties, geographically agnostic, can reach a trusted agreement electronically without a referee – is music to bankers' ears. Some say it's still an immature technology looking for a problem; others say it will transform how we make payments worldwide. At the same time the incumbent in the global money-moving industry, Swift, is fighting back. So the jury is still out.

For

Even though blockchain is potentially entering Gartner's "trough of disappointment" in its so-called "hype cycle", it still offers answers to the current painpoints in international payments. It's all about getting rid of the middleman. When two business parties involved have a single-shared view of the transaction, there's a paradigm shift.

"After a century in which the costs of financial intermediation have remained largely unchanged, DLT could now be a game-changer for the industry," explains Kuangyi Wei, head of research and market engagement at management consultancy Parker Fitzgerald. "When it comes, the estimated savings could be up to a third of current operating costs."

The requirement of banks to hold and process funds temporarily for transactions that they might otherwise have no vested interest in could diminish with blockchain.

Currently, payment providers need to pre-fund accounts on either side of a transaction in local currencies. This can be expensive and lead to a poor deal for customers. DLT negates this need. That's because trust is hardwired into the design of blockchain. Everyone has a record. The ledger doesn't lie. Shared record-keeping also boosts efficiency and reduces data discrepancies.

"All parties within the payment system have to reconcile the data at every stage. DLT could provide a highly available, cryptographically secure and trusted platform where all parties have access to the same data," says Otto Benz, payments technical services director at Lloyds Banking Group.

After a century in which the costs of financial intermediation have remained largely unchanged, DLT could now be a game-changer for the industry

Small to medium-sized enterprises, in particular, suffer from payments difficulties. "They are currently left in the dark about the status of their transaction and out of pocket from high fees," says Marcus Treacher, global head of strategic accounts at Ripple. "It can also take weeks for a cross-border payment to settle, which can put the brakes on a small business's liquidity, and create friction between customers and suppliers."

Those that do millions of international micro-payments, from hotel booking engines to auction sites, also have an issue.

Ripple, a California-based company, among others, is leading the charge for blockchain in this industry. It's already working with more than 100 financial institutions worldwide, including the Bank of England, to leverage the technology.

But Ripple, backed by Santander, says its distributed ledger is not currently scalable or private enough for banks. "Putting all the world's transactions on one blockchain is impossible. Institutions also have diverse needs when it comes to payments and one single blockchain is not capable of serving all of these, let alone in the public domain," says Mr Treacher.

It's the reason why Ripple and others are developing inter-ledger protocols that can be adapted by all. Banks in different countries often run computer systems that cannot talk to one another. When the international financial plumbing is standardised then this technology could come into its own and in the process strengthen the global financial system.

"This should increasingly provide one route for improving consumer confidence in banking, in that the requirement of banks to process funds for transactions that they might otherwise have no vested interest in will diminish, and so banks can be judged solely on the services they provide and the performance of the products they sell," says Kit Ruparel, chief technology officer at Recordsure.

Against

Clunky and cumbersome are two words that have been used to describe distributed ledgers. When immutable databases are maintained by a network of computers, rather than a centralised authority, and secured by advanced cryptography, you can just imagine the computing power you need to reconcile everything. The problem gets worse when the number of cross-border payments, banks and jurisdictions increases.

Centralised databases are still more efficient than blockchains. Over-sold and over-hyped are other words used in this context, managing expectations on what blockchain can achieve will be critical.

“The crucial problem of maintaining the order of all transactions across all copies of the data is a fundamental computer science problem. For DLT to make it into production, the majority of institutions have to agree to use the same procedures,” says Lloyds’ Mr Benz.

There are several forums now established to develop and promote standards for industrywide DLT adoption. One example is Utility Settlement Coin, an asset-backed digital cash instrument using the technology within global institutional financial markets. But these are still early days.

It is the reason why Swift, the 45-year-old, Brussels-based incumbent and global heavyweight in worldwide payments, is still going strong. The co-operative is owned by thousands of banks. The organisation still deals with half the world’s high-value transactions that move across borders.

Swift hasn’t sat still either; with all the blockchain hype, it’s been busy trying to address the painpoints in payments with speedy transfers, transparency, predictability of fees, end-to-end tracking and transfer of rich data. That’s why Swift has developed their Global Payments Innovation (GPI), a new set of business rules that 165 banks worldwide have signed up to. Half of all payments now reach their destination within 30 minutes.

“Rather than combating DLT, a lot of incumbent systems are embracing the opportunities that it presents. The GPI solution is a much-needed upgrade to a broken system. While this is not transformational, it signifies a step in the right direction,” says Mr Treacher.

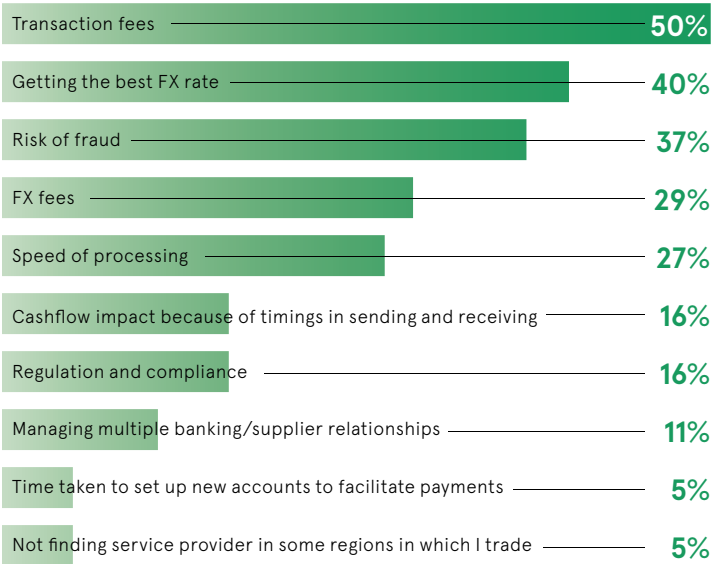
Swift has tested blockchain and is sceptical about whether it could achieve the scale needed for a global payment ecosystem. The examples banks currently use of blockchain are those involving simple in-house transactions or those between just two institutions.

“Operational resilience has also become a major issue for central banks and regulators. Concerns raised about DLT include privacy, security, scalability and competition,” explains Ms Wei at Parker Fitzgerald.

“Take privacy; even if the keys or certificates to each transaction are anonymised, in a small network of users it can be easy to identify participants by analysing transaction flow. Financial services firms are concerned about the idea of sharing a network that allows their competitors to see even anonymised records of their transactions.” So do watch this space.♦

Companies’ concerns about cross-border payments

Top worries of global organisations about making and accepting cross-border payments



Saxo Payments 2017

Easy-to-use security is key to frictionless future

Consumers are increasingly using frictionless payment methods, from contactless to in-app and voice-activated. But before these new ways to pay become the norm, people need to be comprehensively reassured of the benefits

Despite the pace of innovation in frictionless payments, which ease the buying process by removing manual steps, cash and other established payment methods remain remarkably widely used.

Some 87 per cent of people, polled across five countries by global payments provider Paysafe, use notes and coins to make one or more purchases a month. Others without debit or credit cards often use prepaid cards or cash replacement systems so they can order online, but complete the transaction using cash at pay points.

Paysafe’s *Lost In Transaction* report, which looks specifically at consumer behaviour and attitudes in the UK, the United States, Canada, Austria and Germany, finds that frictionless payment change is afoot, albeit at a tempered pace.

Online, more than half of the 5,056 people polled for the report use digital wallets to store card details and make payments, but in-store only 9 per cent are using mobile wallets. Some 23 per cent make invisible payments on mobile apps such as taxi-booking service Uber, which require no approval process, and 18 per cent use voice-activated payments. Contactless payments adoption, while high in the UK, is particularly low in the US at just 3 per cent of consumers.

Large commerce firms are among those looking to ease the payment process by removing steps for the consumer. Online, one-click ordering uses saved card and delivery preferences to speed up purchases and

avoid cart abandonment. In-store, the Amazon Go shopping experience in Seattle, seen as a potential blueprint for future shopping experiences, allows pre-registered consumers to simply pick items off the shelf, exit and the transaction to be settled directly from their bank account.

Frictionless payments offer obvious convenience and ease of purchase, though service providers will need to work hard to allay any consumer fears.

But a great many consumers are yet to be persuaded by some frictionless payment methods, particularly those that are newer. Being defrauded is the most widely held concern that people have about frictionless payments, a worry for half of consumers. Some 48 per cent are unsure of the security of their personal information, and 30 per cent fear their phone or smartwatch being stolen and used to make payments.

People are also concerned about controlling their purchases. Some 63 per cent worry about automatic

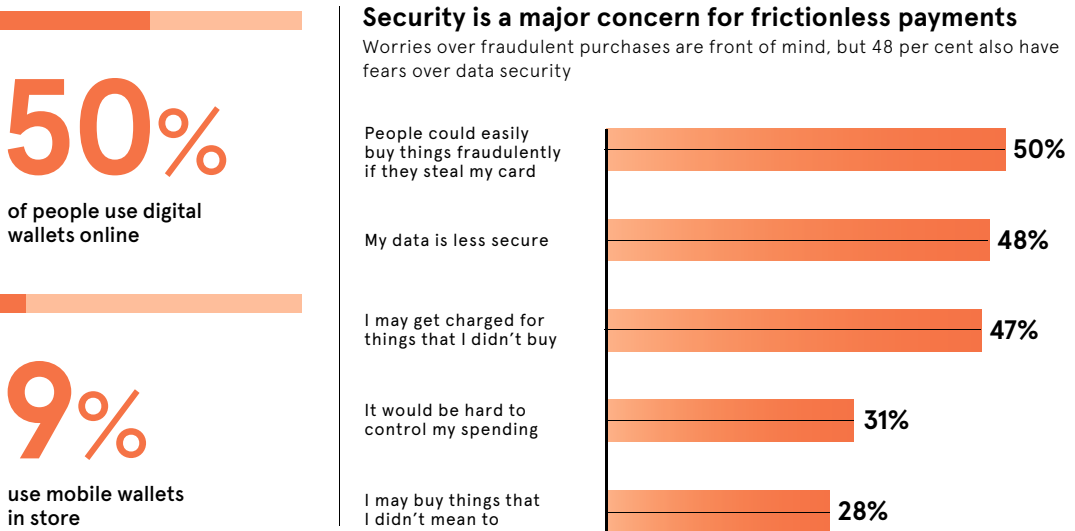
transactions leading to being over-charged and 31 per cent fear losing control of their spending. Two-thirds are unsure they would want a smart fridge to reorder food as it is consumed. And 28 per cent are concerned that the lack of manual steps involved in frictionless payments might lead to them making inadvertent purchases.

These are concerns that retailers must overcome. Frictionless payments offer obvious convenience and ease of purchase, though service providers will need to work hard to allay any consumer fears. The key to doing that successfully will be finding the right balance between convenience and security in all new forms of payment.

Changing long-standing consumer habits is rarely easy and will not happen overnight, but the advantages of frictionless payments are considerable. It is a matter of time before such payments become much more routine in people’s lives and retailers need to be ready for the change.

As consumer appetite grows for frictionless payments, how are small and mid-sized businesses preparing for the future? Find out more in Paysafe’s next *Lost in Transaction 2018* report, released this October at Money20/20 USA and at paysafe.com

Paysafe:group



CHINA

China's giants show the rest how it's done

Mobile payments apps have leapfrogged credit and debit cards in China, signposting the way forward for the rest of the world

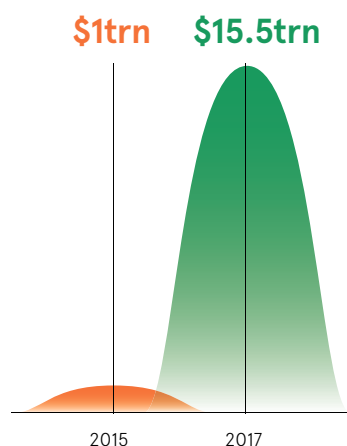
IAN FRASER

China's two mobile payments giants, Alipay, an affiliate of the Chinese ecommerce group Alibaba, and WeChat Pay, owned by the messaging and social media powerhouse Tencent, are streets ahead of their Western rivals in terms of technology, user friendliness, number of users and ubiquity.

To put their scale into perspective, each organisation handled more payments in a single month this year than PayPal's \$451 billion for the whole of 2017, according to research firm Analysys.

In many ways Alipay, which has more than 520 million active monthly customers, and WeChat Pay, with over one billion, point to the future of payments for the rest of the world. By contrast, Apple Pay has only 127 million worldwide, even though it is installed into every iPhone.

Value of Chinese mobile payments



One thing that has driven their recent growth has been the inadequacy of China's traditional banks. Bank customers have to contend with long queues in city branches, long journeys to branches in the countryside and horrendous bureaucracy to get a credit card. The low penetration of card payment point of sale terminals in China, partly down to the fact Visa and Mastercard are banned in the country, has been another factor, as has Chinese millennials' open-mindedness to technological change and willingness to entrust large portions of their lives to companies such as Alibaba and Tencent.

Digital banking expert and author of *Digital Human* Chris Skinner says: "They were able to leapfrog in China because most people didn't have credit cards, debit cards or plastic of any kind. So when mobile payment apps first came out, they immediately caught on. The market was essentially primed. It was a unique set of circumstances."

Widening access to the internet, mobile networks and smartphones was another factor. "In about 2013, the iPhone and smartphones took off in China, and because they already had the trusted QQ network, which became WeChat, and Alibaba with Alipay, it meant these two companies got into a head-to-head battle over payments," adds Mr Skinner.

But the explosion ultimately only happened because Alibaba and Tencent managed to blend seamlessly social media, ecommerce, payment and other finance functions into single apps and user-friendly ecosystems.

"Imagine Facebook bolted on to email with a built-in payment platform for splitting bills among

friends: that is Tencent's WeChat. Or Amazon, with its own payment system that lets you send money to friends using only their phone number: that is Ant Financial's Alipay," according to *Financial Times* Beijing correspondent Yuam Yang. "The network effect of such platforms is vast; if all your friends are using them, it is difficult to opt out."

The payment apps, and QR codes in retailers and other offline businesses on which they depend, have become so ubiquitous in China that young consumers rarely carry a wallet or cash. Even buskers display Alipay and WeChat Pay QR codes instead of laying a guitar case on the pavement.

The firms make use of data from customers' transaction histories to build detailed profiles of each one, which they then monetise within their portfolio of apps in ways that would probably make Google or Facebook blush. They also run credit-scoring businesses which factor users' payment

01 WeChat owner Tencent's headquarters in Shenzhen, China

02 Paying via QR code is commonplace in China, where mobile payments amounted to \$15.5 trillion in 2017

histories and trading histories into their scores.

Alipay's launch of *Yu'e Bao*, or Left over Treasure, is a sign of what these companies are capable of. This is a money market fund designed to Hoover up users' savings and spare change and transfer it into an investment vehicle that outperforms deposit accounts. Tom Slater, a partner at investment management firm Baillie Gifford, who co-manages Scottish Mortgage, a

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£7.7-billion investment trust which holds stakes in all three companies, describes this as "a quite astonishing achievement".

Mr Slater adds: "It is what we really meant by fintech: using technology to give customers a better product and experience than can be provided by the existing industry." By June, *Yu'e Bao* had some \$210 billion in assets under management, making it the world's biggest money market fund by a wide margin, even though it is only four years old.

He attributes Alipay's early success to the support of its former 100 per cent parent Alibaba, which retains a 30 per cent stake in Alipay owner Ant Financial. Ever since Alipay was launched as an escrow service in 2004, Alibaba had been supportive and, importantly, saw payment as a way of improving the ecosystem rather than a means of making money, he adds.

"The real lessons are around the scale of the ambition and focus on making the experience better for users," says Mr Slater.

Mr Skinner says their success showed that the UK wasted too much time developing card payment technologies, such as chip and PIN and contactless, which he argues were already outmoded by the time they were launched.

"In 2015 Chinese citizens transacted \$1 trillion through mobile payments using QR codes. In 2017 it was \$15.5 trillion. In 2020 it's forecast that Chinese consumers will transact \$45 trillion through mobile payments, by which time the country will be pretty much cashless. They have gone from fledgling to mainstream in two years and from fledgling to cashless in five years," he concludes. ♦

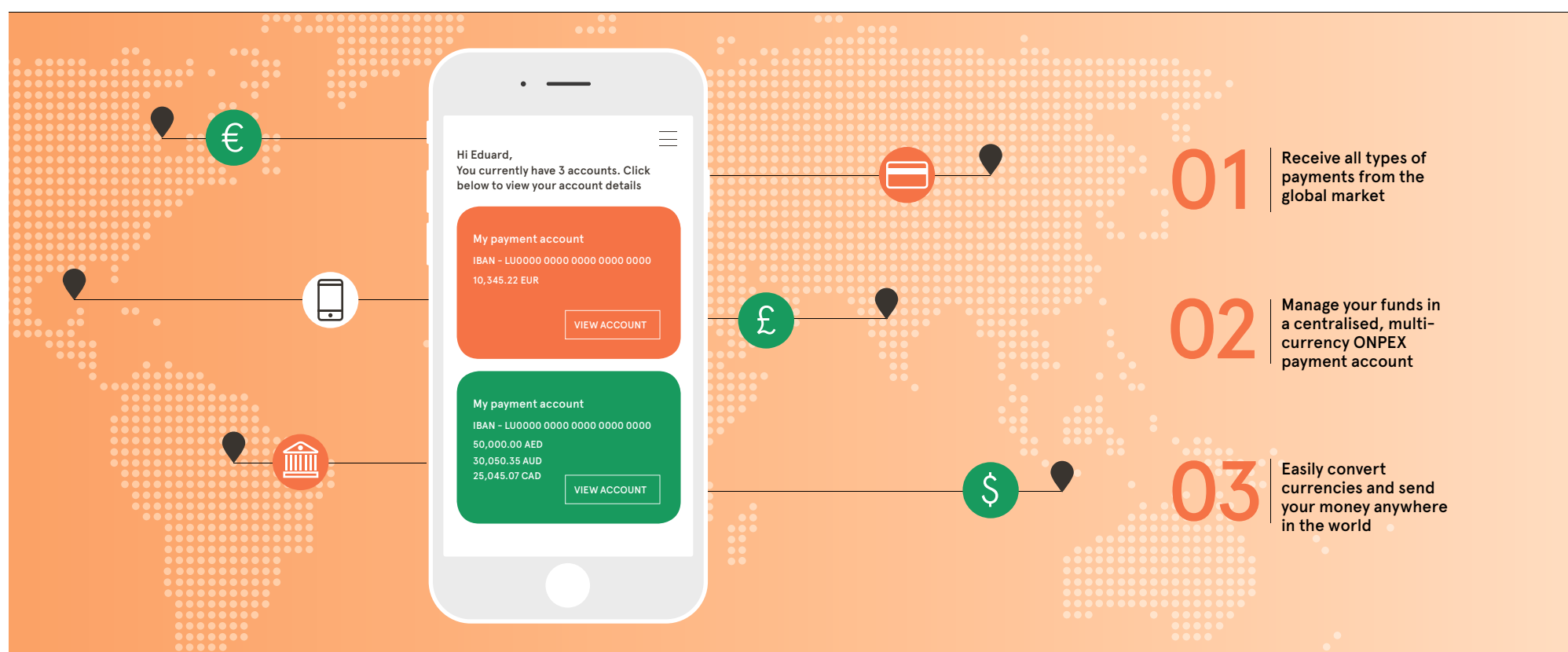


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Anthony Kwai / Bloomberg via Getty Images

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Banking 'as a service' simplifies payments for businesses

Automation technologies are enabling businesses to drastically reduce the costs and complexities involved in building and providing payments solutions, while removing the burden of dealing with an ever-complicated regulatory landscape

Payments have evolved in recent years as companies have attempted to adapt to the behaviour of consumers on ecommerce platforms. This is often geographically influenced, such as US consumers preferring credit card transactions while Germans favour paying on open invoice or direct debits. Meanwhile, decentralised blockchain networks and their ability to

enable smart contracts, are now on the verge of drastically shaking up the financial world. These distributed ledger technologies are still in the concept phase, but will drive the evolution of payments.

This changing technical environment is running parallel to an increasingly complex compliance landscape, driven by new regulations such as PSD2, GDPR and AML4. Also, AML5 and AML6 are just around the corner. There are a huge number of hurdles to overcome to provide the payment solutions that consumers want.

Automation is the key to solving these complexities. For example, an ecommerce marketplace might spend up to 100 hours a week managing its merchants' cash settlements. At the end of the month, this accumulates to spending thousands of pounds on internal accounting resources. Having a fully automated payment system that receives, splits, reconciles and settles these incoming payments would not only accelerate cash conversion and increase customer satisfaction, but would also save costs.

ONPEX, a leading provider of multi-currency IBAN solutions, has

launched a cloud-based, Banking-as-a-Service (BaaS) platform that enables businesses to build, configure and manage their own financial services. The platform offers multiple tools such as IBAN issuing, Single Euro Payments Area (SEPA) and cross-border payments, as well as multi-currency management.

Traditional banks and other payment service providers (PSPs) often lack API-based IBAN accounts, as well as cash and payment management capabilities. These features are vital in ensuring businesses can scale and grow effectively. Payment networks are highly complex, which is why it is so important to give regulated companies, as well as non-regulated firms that want to automate their payment flows, simple API toolkits where they can connect their existing software applications and business processes.

If a company or another financial institution wants to open or close accounts, transfer money or exchange currency, everything can be fully automated through APIs, rather than using a clunky proprietary solution. The automation provides a seamless integration into business processes, but also means

an interoperability with other providers. PSD2 requirements, open banking, interoperability, and connectivity between banks and service providers can all be guaranteed through APIs.

By offering an API-based solution, ONPEX is positioned at the forefront of open banking. Even the ONPEX administration portal is based on the underlying APIs that all their clients enjoy. ONPEX deals with all of the complexities on behalf of their clients, who only need to send a request to their APIs and everything is taken care of for them. This means the implementation of such solutions is much easier for them and drastically reduces their costs.

On the other side, ONPEX is directly connected to the clearing systems, to the banks and corresponding network, meaning ONPEX participates on the same level as other banks. By automating the processes, there is less manual intervention and faster processing times, so there are further cost-savings and better performance when processing local and international transfers.

Cloud-based infrastructure contributes heavily to the efficiencies involved in enabling sophisticated payment solutions, not to mention in enabling the scalable as-a-service model. Previously, when creating solutions on-premise, you would require several cost and resource-intensive layers, including a datacentre, facility management, hardware administration and software management, and a DevOps application, before you even thought about adding your financial service application. Building these

layers underneath made it highly complex and expensive.

Now, using a cloud-based infrastructure immediately reduces the costs involved and improves scalability, so from a transaction processing capacity, the sky is the limit. ONPEX has reduced its costs tremendously, so they can provide the service at a better price to their clients compared to old legacy core banking systems and infrastructure.

The ONPEX platform not only completely provides banking and payments as a service, covering the full software technology and the financial service, but it also ensures everything is taking place in a regulatory compliant environment. If the client is a marketplace, for example, they can focus entirely on the needs of their sellers. ONPEX removes the burden of regulatory compliance from them so their clients can dedicate all their energy and resources to growing their business.

The ONPEX software also supports organisations in performing operations such as client and account management, SWIFT and SEPA transfers, foreign exchange, acquiring, card and APM collecting, settlements, reconciliation, onboarding, billing and invoicing. This supports even the smallest of businesses to scale through flexible solutions.

ONPEX is a leading hub for the exchange of value for the digital economy. Currently they are dealing with payments and banking but, with the emergence of cryptocurrencies and smart contracts, it certainly does not stop there. This new generation of payments will require a third party to ensure a trusted payment flow.

The ONPEX platform is agnostic to the value exchanged and the method of transfer. Companies are enabled to implement seamlessly the transfer and tracking of funds or other values in their solutions, whether it is a marketplace, logistics company, trading firm or financial institution.

The ONPEX platform is agnostic to the value exchanged and the method of transfer

For more information please visit onpex.com



Christoph Tutsch
Founder and chief executive
ONPEX

Rivals jockeying for position in big race

Possible outcomes of current disruption in the payments industry could take a number of forms. Here are four favourites

TIM COOPER

Margins for global payments providers are under intense pressure as they face stiff competition from technology firms and tougher regulation. These factors are likely to trigger radical changes in the payments industry. For example, this year's new open banking regulations aim to increase competition by allowing third parties to

access data, and build applications and services around large providers. Meanwhile, several financial technology firms have already disrupted the existing payments model and we can expect more. As a result, consultant Accenture predicts a "wild ride ahead" for payments providers, especially as younger customers with dwindling loyalty to banks take advantage of this greater choice, demanding

faster and easier digital tools and services, such as mobile wallets and better customer experiences. Banks will still have a role, says Accenture. But if they do not rethink their model, other big tech players, such as Google and Apple, will do it for them. In this context, consultant Deloitte has predicted four main possible future scenarios in the payments industry, which are examined here.

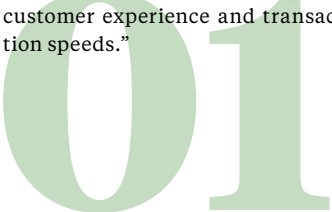


Status quo

Deloitte says the current situation, with major banks continuing to run existing payment systems, will not survive as regulations will not permit it. Vice chairman of Deloitte Doug King says banks are finding it difficult to comply with the complex technical requirements of new regulations, such as the open banking rules. "The market is responding slower than expected," he says. "But the infrastructure to enable a more open ecosystem is emerging."

Jack Burrows, principal consultant at Capco Digital, says: "Ten years is not a long time in payments; it takes time for things to change. The banks' biggest barrier to change isn't the technology, people or ideas, it is their incumbent revenue stream from card transactions. This means the status quo payments model will still exist in ten years. "Point-of-sale card payments will still be the way people settle most payments. However, there will be more use of devices, such as mobile phones, in the next ten years, as

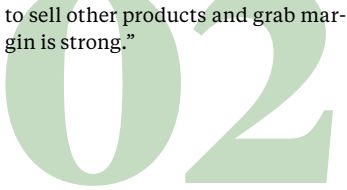
people get used to contactless payment. The real change will be in online payments, as cards were not designed to work on the internet and are clunky. Winners in this space are companies like PayPal and Amazon Checkout that have innovated around improving the customer experience and transaction speeds."



New oligopoly

In this scenario, payment infrastructure will become more open, but customer trust in non-banks is low. This will limit non-bank newcomers to a handful of players with brand and scale. Deloitte's Mr King says: "Several early-stage fintechs are trying to create something new, enabling a broader ecosystem. Significant ones in Europe include smart money app Yolt, epayments solution Trustly and bank transfer provider Sofort. If there is enough benefit and value to the customer, they can overcome this trust barrier quickly." However, Hamish Thomas, partner with consultant EY, says: "We have done research showing that consumers don't see the need for lots of different ways to pay. If one service works already, why choose another? Other markets may be different though. For example, many

disruptive technologies are being used to fulfil payments in emerging regions such as Africa [due to its lack of existing bank infrastructure]." David Gunn, partner at consultant Bain & Company, says too many payment providers would be confusing. "A relatively small number of mechanisms will dominate," he says. "We are already seeing collaborations between tech firms and banks, not displacing existing actors, but adding new propositions to existing networks. That will continue. "Regulation is forcing banks to collaborate quickly. The biggest threat is moving too slowly and defensively. Once third parties control the consumer relationship, their ability to sell other products and grab margin is strong."



03 Utility model

If more customers are willing to experiment with various banks, non-banks and collaborations, it will enable more providers to offer payments applications that run on existing banking infrastructure. This is similar to the model for utilities such as railways and broadband.

Mr King at Deloitte says regulators favour this model, so it will have strong support in the long term. But it will only happen if there is enough trust and demand from customers.

Amit Bhute, global head of payments at IT firm Virtusa, says: "In the future, the payments landscape will likely be a mix of a new oligopoly driven by [money transfer companies] like PayPal or Klarna and utility status for the banks that currently dominate payments. The rise of the former will accelerate the latter. Firms like PayPal and Klarna increasingly 'own' both sides of a transaction, offering cheap, fast and easy experiences, and added perks such as payment instalments or credit.

"Banks must adapt. They are now relegated to a utility role, providing the infrastructure to facilitate the payment, but not owning any of the

customer relationship as they used to."

Mr King disagrees. "Banks have a strong role in the payments value chain, which won't go away soon," he says. "There is no evidence of substantial attacks from entities wanting banking licences and to be regulated for holding people's cash. However, open banking is pushing towards overlaying new technology on existing models."

Bain & Company's Mr Gunn says the landscape is already shifting in Europe, where banks' control over payment infrastructure has diminished. "For example, [mobile banks] like Monzo and N26 are picking off customers with specific propositions, and doing it cheaper and with slicker customer experiences," he says. "But banks retain strong consumer trust. If they act quickly, they can maintain a solid position."

Jack Burrows, managing principal at consultant Capco, points out that trust of tech firms is also low. "Banks have improved everyday banking for customers and are regaining some trust," he says. "But tech firms have been mired in scandals around data and tax avoidance. The banks need to work out what they are good at, which is storing data and money, and being trustworthy. Tech companies do customer experience best. The two need to come together."



04 Parallel infrastructure

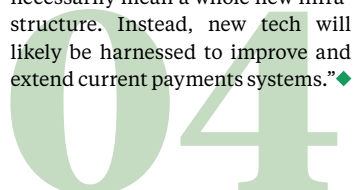
Completely new methods of payment could take hold, says Deloitte. The likeliest candidates are cryptocurrencies that use blockchain technology to bypass traditional currencies, central banks, and clearing and settlement systems.

This has value in certain situations, but most experts do not expect such a new infrastructure to become dominant in mainstream payments over the next decade.

Mr Gunn at Bain & Company says: "Regarding mass consumer payments, it is difficult to see what problems cryptos solve. With other kinds of payments, including cross-border

transactions, there is no single, central counterparty. So there is a better chance that something like cryptos could take hold. Several banks are experimenting with these ideas."

EY's Mr Thomas adds: "There is much work looking at new technologies as alternatives to the current structure. We have research showing that 60 per cent of central banks are looking at blockchain. But an appetite to use new technology does not necessarily mean a whole new infrastructure. Instead, new tech will likely be harnessed to improve and extend current payments systems." ♦



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