FUTURE OF MONEY

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ABSTRACT MONEY

Understanding the future psychology of abstract money

How will our relationships and attitudes to finance, wealth and value change as perceptions of money evolve in the decades to come?

Sharon Thiruchelvam

Throughout history, societies have used physical tokens to represent units of currency: sea shells, stones, beads, metal coins and paper notes. Increasingly, this relationship between money and material objects is being severed.

In 2017, card transactions overtook cash for the first time and the use of contactless payment cards doubled. UK Finance, the trade association for financial services, predicts that by 2027 cash will account for just 16 per cent of all transactions.

People pay in person using plastic cards or smartphones; they organise and move their money around an expanding universe of mobile fintech apps and can exchange it into a boggling variety of new systems of value, including virtual and cryptocurrencies.

Behavioural economists have long contested the principle, expounded in classical economics, of "fungibility" or the idea that money is a neutral medium of exchange. Richard Thaler, the 2017 Nobel prize winner for economics, made the observation that people tend to treat different sources of money, earmarked for different uses, in different ways. Money, he argued, is "socialised".

This particular cognitive bias, which he called "mental accounting", is just one of many colouring how we interact with money. Now a number of sociologists are examining how mobile finance and new forms of virtual currency are shaping how we relate to money and think about its value. How will they affect cognitive biases?

The most fundamental cognitive bias associated with cashless payments is its dulling effect on the "pain of paying". Behavioural economists observe that the psychological discomfort experienced when parting with money varies by medium. Contrast the pain of handing over a wad of £50 notes taken from an ATM, compared with the guilt-free ease of a frictionless one-click payment on Amazon.

"Many studies have shown that people spend more when there are fewer blocks preventing us from doing so and that our sense of the reality of the money is cut loose," says Professor Grace Lordan, a behavioural economist at the London School of Economics.

Professor Bill Maurer, legal and economic anthropologist at the University of California, Irvine, notes that new technological platforms are socially differentiated and differentiated ways of paying that render the money associated with them similarly multiple. Age, gender, nationality and social class can be differentiators, and each comes with its own habits, codes and users.


Sara Kurfeß/Unsplash

"Different groups tend to gravitate to different payment technologies," he explains. "For instance, teenagers and young people were once the near-exclusive users of the mobile payment app Venmo in the United States, and early adopters of bitcoin were almost exclusively white and male, a profile that has grown more international, though no less male.

"Apple Pay is only available on newer and more expensive iPhones, creating a segmented market that itself is further separated for the hoi polloi of commerce because, at least in the early days, Apple Pay was only accepted at select retailers, such as the high-end retail chain Whole Foods," Professor Maurer says in the book *Money Talks*.

"We're witnessing something of a monetary revolution," says Nigel Dodd, professor of sociology at the London School of Economics. "Money is morphing from something we have, to something we do," he says in the same anthology. "It is becoming increasingly apparent that money is a process, not a thing, whose value comes from its qualities as a social relation."

As the use of new virtual currencies and alternative units of exchange gather pace – J.P. Morgan in February became the first commercial bank to launch its own, the JPM Coin – behavioural research into cryptos is just beginning.

Last summer, the Dutch bank ING released a Europe-wide survey into perceptions around cryptos. While 32 per cent of people reported it is the future of investing, most considered it is a riskier investment than holding cash, gold, real estate or government bonds. ING called on behavioural economics to explain: "The average person's perception of risk is partly based on a natural bias towards tangible and familiar assets, such as gold and property, and less about the actual degree of risk represented by a particular asset class."

The report found that countries with lower per-capita income levels, including Poland, Romania, Spain, Turkey and Italy, seem likelier to consider paying with cryptocurrency. Bitcoin's extraordinary surge in value between 2017 and 2018 positioned it as a way to augment earnings, according to the report.

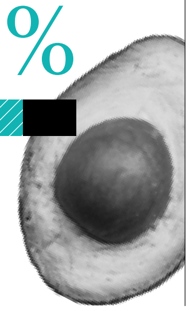
Recent events give substance to these findings. The virtual gold in the online role-playing game *World of Warcraft* is now almost seven times more valuable than real cash from Venezuela, according to *CNBC*. Venezuela, in a desperate bid to mitigate hyperinflation, even launched its own cryptocurrency early last year.

Artificial intelligence (AI) presents another dimension to the debate around the use of digital currency. Could AI learn consumers' behaviour and exploit cognitive biases to part them from their cash or be used for good?

Dr Grace Lordan of the London School of Economics notes: "When we think about money, we are affected by our emotions and our autopilot. It is quite easy to manipulate people's behaviour."

Professor Maurer, who is embarking on a new study into AI, funded by the credit card company Capital One, sees opportunities to help financial and banking institutions develop more responsible and fairer standards in their online services. "Social media and online behaviour may open doors to credit for the underserved, who lack traditional credit histories," he says.

Behavioural economics is a young discipline, just a few decades old, but there are many opportunities for future interdisciplinary research.



78% of US millennials have made a split-second buying decision while shopping online

ING 2018

35% of people across Europe think that cryptocurrencies will be the future of spending online

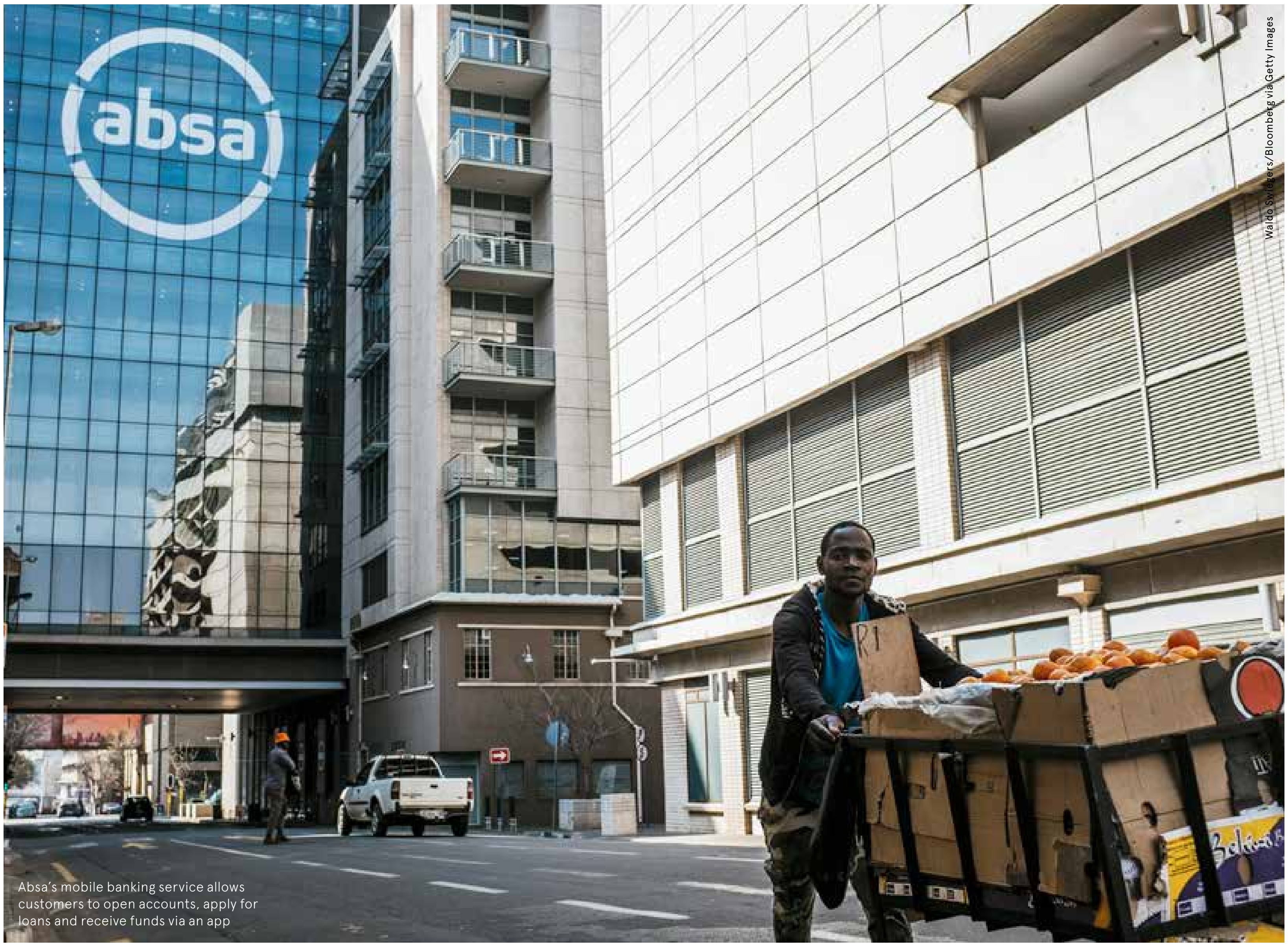
70% believe holding cash is lower risk than owning cryptocurrencies

ING 2018

DEVELOPING MARKETS

Challenges in banking the unbanked

Potential social and economic benefits of financial inclusion in developing countries are huge, yet many practical obstacles remain on the path to a fully banked world



Waldo Swiegers/Bloomberg via Getty Images

Absa's mobile banking service allows customers to open accounts, apply for loans and receive funds via an app

Felipe Araujo

These days the 14 digits that comprise our bank account number and its sort code are almost as intrinsic to our identity as name and date of birth. Getting a job, renting a house, having an internet connection at home, in most of the developed world all these things would be nearly impossible without some sort of financial inclusion.

And yet today the unbanked population stands at a staggering 1.7 billion globally, according to data released by the World Bank. In the European Union alone, close to 40 million citizens don't have a bank account. Among member states, only Denmark and Finland have 100 per cent of their populations fully included in the banking system. But, by and large, the unbanked reside in the global south.

"In the developing world there is an issue of absolute low incomes," says Elisabeth Rhyne, managing director of the Centre for Financial Inclusion, a US think tank based in Washington, which aims to foster financial inclusion in the developing world. "In regards to how much in deposits people would be providing, how large a credit they might want, these are below the threshold of feasibility for banks using traditional branch-based, teller-based models. So you couldn't put a branch out in a rural area and expect it to be profitable, given the amount of income that it would generate."

Some countries have already come up with innovative ways to bring about financial inclusion. In Kenya, for instance, M-Pesa uses a simple text message to allow people to send and receive cash, resulting in almost half of the country's GDP now flowing through the system. Barclays' ABSA Cellphone Banking service in Africa enables customers to use an app to open accounts, apply for loans and receive funds, without ever needing to step into a branch. Established players like Orange and Telefonica are trying to replicate that success in markets from Latin America to Southeast Asia.

Infrastructure, however, remains a major problem, explains Imran Rasul, professor of economics at University College London. "A lack of infrastructure prevents many services reaching the rural poor, not just banking. However, more specific to banking is the fact that the poorest often lack forms of collateral – land or other assets – which many formal banks rely on to secure loans against."

Most banks still rely on traditional forms of credit assessment. This is how it works: credit risk managers screen out a huge pool of unbanked individuals looking to access formal finance. These customers, often referred to as "thin file", are rejected due to the lack of information on how risk tolerant or risk averse they are when it comes to money. One option may be to take out loans with absurd interest rates, but in not being able to pay back the interest, these citizens jeopardise their ability to receive formal finance in the future. It becomes a vicious circle.

> **You couldn't put a branch out in a rural area and expect it to be profitable, given the amount of income that it would generate**

But amid the chaos and difficulties banking in poorer countries represents, there's still money to be made. By failing to reach the billions of people living outside the financial mainstream, banks are missing out on an estimated $380 billion in annual revenues. Furthermore, by giving people access to savings accounts and credit, middle classes in countries such as China, Brazil, Nigeria, India and Mexico could be expanded by the millions, strengthening the global economy in the process.

In comes fintech. By prioritising 24/7 access, fintechs offer services available via non-traditional channels, such as social media, empowering customers to a great extent. According to a report by PwC, by 2020 social media will be the primary medium to connect, engage, inform and understand customers, from the mass "social mind" to the minutiae of each and every individual, as well as the place where customers research and compare banks' offerings.

When entering new markets, however, cultural factors matter. In some countries people still firmly hold on to the belief that keeping money at home is safer than keeping it in the bank. In 2016, India's prime minister Narendra Modi suddenly announced the demonetisation of 500 and 1,000-rupee notes, a move that resulted in widespread panic as citizens rushed to banks to swap out their high-value notes for lower denominations, leading to many branches running out of money to give out in return.

In Argentina, people still haven't forgotten the 1998-2002 financial crisis, which caused many to lose their life savings. Today, many of the Argentinians, who lived through their country's great depression, still prefer to keep their money at home and live outside the margins of the financial mainstream.

"In Latin America, in particular, 'I don't trust banks' is one of the main reasons people give when asked why they don't have a bank account," says Ms Rhyne. "The whole legacy of hyperinflation throughout the continent means that people, very smartly, think 'I want my money to go to work, to work for me, and if I put it in a bank it's just going to sit there and gradually dwindle in value'."

Central banks and governments have proven to be historically bad at promoting financial inclusion among marginalised communities. To address this, officials are increasingly issuing licences to third-party fintech companies, allowing them to work alongside central banks to plan and deploy an infrastructure which will support financial inclusion.

Take Finland's example. For the past two years, the country's immigration service has been handing out Mastercards to asylum seekers, who don't have the necessary documentation to open a conventional bank account.

Developed by the Helsinki-based startup Moni, the card helps to address several problems specific to asylum seekers, according to Jouko Salonen, director of the Finnish Immigration Service. People can use their accounts to buy things, pay bills and even receive direct deposits from employers. Meanwhile, every transaction is recorded in a public, virtually incorruptible database maintained by a decentralised global network of computers. That enables the immigration service to keep track of the cardholders and their spending.

Over the next decade, the average consumer profile will change dramatically as the baby-boomer generation ages and generations X and Y, and then Z, take over. The latter group, also known as millennials born between 1980 and 2000, is bringing radical shifts to client demographics, behaviours and expectations. Their preference for a state-of-the-art customer experience, speed and convenience will further accelerate the adoption of fintech solutions.

Millennials seem to be bringing a higher degree of customer centricity to the entire financial system, a shift that is being crystallised in the DNA of fintech companies. While 53 per cent of financial institutions believe they are fully customer centric, this share exceeds 80 per cent for fintech firms, according to PwC.

1.7bn

people around the world are classed as unbanked

World Bank 2018

While there is an unmet demand for formal savings instruments in parts of rural Africa, Southeast Asia and Latin America, expanding access to existing formal institutions and the products they are currently offering, with policies that are centuries old, is unlikely to be enough to broaden financial inclusion and mitigate poverty.

"Unlike in the West, people in the developing world don't use bank accounts as a financial management tool," says Ms Rhyne. "In poorer countries, a bank account is just a way for people to get their monthly salary. For them a traditional bank account is not essential for financial prosperity, but over the next decade I'm pretty sure digital payments are going to be essential."

LARGEST UNBANKED POPULATIONS

Millions of people without a bank account and those who own a mobile phone in 2017

World Bank 2018

Commercial feature

Business union

Western Union is expanding its platform capabilities to boost the flow of money for businesses and consumers around the world

Arguably the most innovative digital retailer of our era, Amazon earlier this year had a challenge. It wanted to expand its reach and sell goods across Latin America, Africa and Asia where consumers preferred to pay in cash. The obstacle for the global internet giant was how to take payments from people who purchase goods and services exclusively with cash.

The solution was important for Amazon's service offering to these customers, but also for the underbanked and cash-centric customers who want access to the vast selection of goods that are often only available online.

So Amazon turned to a company with unique expertise in moving money through digital or cash channels: Western Union. Now customers in a growing number of countries can buy online at Amazon and pay cash at a Western Union agent location.

Digitalisation of services is swiftly revolutionising customer expectations. Now, whether you are a farmer in Peru or a software developer in Taiwan, people and companies expect their payments, no matter how small, to move seamlessly to any person or company.

> **The company is facilitating a money-transfer superhighway for the global marketplace through customised alliances of all kinds**

Online payments make moving money nearly anywhere in the world technically possible, but there are other factors that can complicate the transfer of money across borders, including international compliance regulations, volatile currency exchange and the difficulty of cross-border currency transfer across the globe.

Western Union, once known primarily for its ubiquitous global retail footprint, is becoming a digital-services-first company. It continues to accelerate digital access across the globe for its consumer-to-consumer business and has digital offerings in more than 60 countries and territories, with plans to expand.

The company is pairing its growing digital network with its physical, account and wallet payout network to move money fluidly from digital to cash, digital to digital, cash to digital and cash to cash.

Leveraging its omnichannel platform in new ways is part of a bold strategic expansion by Western Union. Digital services have driven Western Union's internal growth and can now also help drive the growth of other organisations.

At its core Western Union is a sophisticated money-moving engine with a robust digital footprint, settlement engine, treasury and compliance infrastructure, anti-money laundering, fraud detection, and a vast physical network across 200 countries and territories, along with the ability to send money to billions of bank accounts and wallets in more than 100 countries.

Opening its platform is part of a bold strategic expansion for Western Union. The company is facilitating a money-transfer superhighway for the global marketplace through customised alliances of all kinds. These alliances help move money and are driving customer engagement in a truly global way, either through a co-branded end-to-end solution or by allowing partners to utilise just a single part of its payout network capability.

"Companies with global ambitions intuitively get the power of our network," says Odilon Almeida, president of Western Union Global Money Transfer. "They can leverage a network that took us many years to build and expand their businesses overnight. It gives them instant access to our world-class digital capabilities, our unrivalled physical network, and rapidly expanding account and wallet payout network."

Through its M-PESA mobile wallet, Kenya's leading mobile network operator Safaricom was able to do something generations of financial institutions failed to do by bringing financial services to millions of Kenyans who had never had bank accounts. Recently, under Western Union's payout services offering, Safaricom's 23 million largely unbanked M-PESA mobile wallet users are now equipped with the ability to transfer money globally from their wallets.

"The ideal prospects for us already have digital in their DNA and understand the extraordinary value that comes from constant innovation," says Mr Almeida. "Our goal is to cultivate relationships where the two companies work collaboratively to reach broader groups together.

"We go from global to local and they go from local to global. Everyone is connected. Everyone grows. Everyone wins."

For more information please visit westernunion.com

Commercial feature

Convenience culture leaves consumers vulnerable to fraud

Contactless payments may save consumers a fraction of time at the point of transaction, but the impact on their financial security is driving the need for alternative solutions

Viola are proud to announce the opening of Viola Money's London headquarters situated in The Shard

More than a decade since the launch of the iPhone, service consumers are fuelled by a desire for technology-enabled convenience. Consumers can now do and buy practically anything through a frictionless and seamless experience on a smartphone.

> We are constantly looking for alternative ways of giving our users the convenience they desire, while at the same time reducing the risk

This craving for convenience and dislike for anything that hinders the speed and ease at which actions can be carried out has driven the rise of fintech. Few instruments have been more disrupted than cash, the historic form of remittance that endured centuries of technological advancements, but is now viewed as an enemy of the digital age.

The dominant antidote to cash-hating consumers has been contactless payments. First introduced in the UK by Barclays in 2007, payments completed simply by tapping your card or smart device on a point-of-sale terminal are now more popular than chip and PIN transactions in stores across the country.

However, is the convenience of completing a transaction slightly quicker worth the risks? In 2017, contactless card fraud overtook cheque scams for the first time reaching £5.6 million, according to trade organisation UK Finance, and the national reporting centre for fraud and cybercrime, Action Fraud,

Examples of web and app-based products, Viola Corporate and Viola Black. For more information please visit: violacorporate.com violablack.com

Commercial feature

Viola team members Matthew Goodlad (legal and compliance) and Melissa Hamilton (Viola Exchange project co-ordinator) at The Shard

reported at the beginning of 2019 that such types of theft now account for more than half of debit and credit card crime.

"It is a massive problem and will continue to be so for as long as banks and other financial services companies continue using contactless, near-field communication technology to drive convenience to our customers," says Christopher Hamilton, chairman of Viola Money. "All cards will be contactless shortly, so all the criminals have to do is stay in front of technology to continue capitalising on the convenience culture."

Contactless theft can consist of such small amounts that many people don't even realise they've been a victim of fraud. Among those who do, many don't think they are losing out because by identifying a transaction as fraudulent they can get their bank to refund the amount. What they neglect to consider is the time and effort required to do so.

"There are 168 hours in a week, 40 of which you get paid for and 56 you should be sleeping, so for the 72 left to walk the dog, eat lunch or just enjoy life, how many do you want to give up telling someone on the phone that you didn't make a £5.17 transaction that has shown up on your account?" asks Mr Hamilton. "The thieves won't go for the round £30 because they don't want you to spot your card has been compromised.

"Pick pockets are just not interested in your cash anymore; beyond contactless, they are also after your smartphones and online logins. Soon they will just discard the cash in your pocket in the pursuit of greater gains at the ATM or, worse, online. They don't even have to go to the trouble of picking your pocket. How many times have you entered all the information required to pay for something on an airline or retail website that you thought was secure? It isn't secure. Someone can get it; they just haven't got yours yet."

Viola provides the kind of digital products that are disrupting the financial services industry, but it refuses to sacrifice the protection of its customers for the sake of a few extra seconds of convenience. The firm prioritises security at the heart of its products.

Viola Black, the online account that anybody can open in minutes, offers a feature that allows users instantly to lock and unlock their card at the click of a button, ensuring they have complete control over their security. The company also promises never to link a customer's principal bank account details to their Viola Black card.

"We are constantly looking for alternative ways of giving our users the convenience they desire, while at the same time reducing the risk," says Mr Hamilton. "What Viola must do is balance the needs and the wants of our customers. Most customers need convenience and want security, but really it should be the other way around.

"Viola puts a tiny step between the two desires and smooths out the objective. The seconds that we add to the process of needing and wanting in the Viola customer journey is microscopic in comparison to the time it takes to overcome the effect of card crime. Seeing what is needed, watching what is happening and considering the results of our solutions will lead to a more secure environment for Viola and its customers."

As consumer habits continue to evolve and the desire for conveniences grows further, Viola is committed to monitoring the habits and transactions of their customers to learn and adapt as required, not just online but from point-of-sale transactions too. Understanding what was bought, for how much and how long the transaction took is crucial to adapting to the ever-changing expectations of consumers in the digital age.

"Cash will disappear and that's a fact," says Mr Hamilton. "We just don't need it anymore and it is becoming harder for some people to get hold of. It's difficult to handle, costs money to bank and takes time to ensure that your till has a float. What we need to care about is who can't have a bank account. Someone might have bad credit; they may have just moved in or have been recently divorced. So many reasons stand in the way of getting your own account and a debit card. Viola does not see that and provides an account that is open to all. But if the motive is crime then watch out, we will see you."

VIOLA MONEY

For more information please visit violamoney.co.uk

Q&A

Consumers embrace fintech in the post-crisis digital age

Christopher Hamilton, chairman of Viola Money, a provider of digital finance products, charts the rise of fintech, and explores the factors that have transformed consumer attitudes and behaviour

How have changes in consumer finance habits created demand for fintech firms?

When world travel became more affordable, consumers craved a more efficient way to spend their money. We have the major card companies to thank for breaking down the barriers to accessing our money, but when debit became the norm rather than credit, and rapid advances in technology disrupted traditional banks, fintech companies such as Viola were able to contribute and innovate. Providing credit to consumers must be left to the institutions that can manage the risk and have the required financial capacity, but giving people access to the money they already have in their accounts is much less of a challenge. For consumers who prefer to live on what they already have, rather than on credit, the appetite for digital-only alternatives for managing their day-to-day finances is huge and gives the likes of Viola the confidence to bring products to market.

To what extent have negative perceptions of the banking industry driven consumers to seek alternatives?

Consumers aren't necessarily moving from traditional banks to alternative players; mostly they're sticking their toe in the water by running more than one account. The vast majority of the people who have opened accounts with fintech companies still take their wages in the more traditional banks, but Viola is not a bank. We believe money management should be a necessity, not a privilege, so anybody in the world can open a Viola Black account in a matter of minutes and manage their finances in a simple, modern way. Having said that, the perception of what the banks did to their customers during the financial crisis has certainly driven consumers to seek alternatives and consequently fuelled the rise of fintech.

How else has the financial crisis impacted personal finance for people in the UK?

The aftermath of the financial crisis saw regulators demand that banks should separate their investment and retail businesses. They failed to realise it was the riskier investment businesses that enabled banks to provide an efficient retail service with extensive branch networks and the staff that come with them. Figures from the Office for National Statistics show nearly 6,000 local bank branches have shut since 2010, a fall of a third, and recent analysis by the *BBC* revealed that around 13 million adults in the UK live in areas where at least half the local banks and building societies have closed. This has a hugely detrimental effect on local communities, particularly those in rural and remote locations. Changes in the banking environment are affecting the lives of so many and this only breeds further negative sentiment in the banks enforcing the closures. Never mind cashless, very soon it will be a chequeless society as well.

> Viola has a very clear vision of its future and that is to provide global accounts to people and businesses around the world

How has the rise of fintech impacted the UK's incumbent financial institutions?

Change is good, and the rise of fintech has also driven banks to reconsider how they interact with the consumer and adopt technology to provide better products and services. It's clear the ability of companies such as Viola to provide alternative digital accounts and the services that go with them has had an effect on the traditional banks, but it will not have had any impact on their business outlook. The biggest impact that has been felt by the financial industry is on the money changers and remitters. The rest of the banks will have hardly noticed a difference, but as the challengers find their feet and figure out what service the consumer really wants, then we will see a change.

How will Viola adapt as financial services and consumer expectations continue to evolve?

Through a global outlook. We need to look at what is happening around the world rather than just in the UK. The migrant population is growing and the desire to study and work overseas will further drive the increase in demand for fintech solutions. Viola has a very clear vision of its future and that is to provide global accounts to people and businesses around the world. We have spent the past six years developing our concept and technology, and looking at the way in which the market is evolving. We are already established in two continents, shortly extending to four and then six by the end of 2020.

MONEY LAUNDERING

How Brexit will impact the fight against corrupt wealth

Experts fear losing access to EU registers on crime and criminal intelligence could undermine the work of anti-money laundering initiatives in a post-Brexit UK

Yuriko Nakao/Bloomberg via Getty Images

Europol's headquarters in The Hague

Burhan Wazir

As the UK approaches Brexit, financial experts warn that a significant consequence of its departure from the European Union could be that money laundering is harder to combat.

According to Transparency International, billions in illicit cash flow through the UK economy every year; money which is laundered by purchasing property and businesses. The corrupt wealth, often stolen public funds and bribes, is legitimised after passing through UK financial institutions. The National Crime Agency (NCA) has estimated that "many hundreds of billions of pounds" are laundered through UK banks and their subsidiaries annually.

Corruption Watch estimates that UK banks have been implicated in the laundering of at least £5.6 billion of corrupt money since 2008. It is likely that the real figure is far higher; in 2015, Deutsche Bank found strong evidence that the UK had received £70 billion in illicit funds between 2006 and 2015, with a significant amount originating in Russia.

The UK is currently a member of Europol, the EU law enforcement agency, which is mandated to tackle organised crime, including money laundering, within the bloc. Europol maintains a criminal information and intelligence register called the Europol Information System (EIS), which gathers the national crime databases of all member states and is searchable by law enforcement agencies across the EU.

After March 29, or when the UK leaves the EU, it is unlikely to continue to be a member of Europol, which would restrict its access to the EIS unless new bilateral agreements are reached with each of the member states. Lawyers and accountants believe this could hinder the ability of UK officials to combat the flow of illegal money since the UK government would find it harder to track the movement of funds.

Last year, the NCA said UK-based companies seeking to increase trade with countries outside the EU would be more likely to come into contact with corrupt markets, especially in developing countries. The agency also warned that Brexit would provide added incentives for criminals to launder money by investing in UK businesses. Other agencies that contributed to the assessment included police forces, MI5, MI6, GCHQ, the Border Force, Immigration Enforcement and the Prison Service.

The NCA also said criminals would look to take advantage of any redesigned customs agreements set up after Brexit, as well as gaps in intelligence-sharing between countries.

"There are a lot of concerns, looking broadly at money laundering and criminal justice co-operation; all these measures within the EU are a big area of concern," says John Binns, partner at BCL Solicitors in London, specialising in business crime and money laundering.

"Extradition, the sharing of information, the mutual recognition of asset-leaving measures, all of that gets turned off on Brexit day. In advance of that, it all needs new security measures fairly swiftly ironed out. In areas of anti-money laundering, there need to be agreements about how the UK will be treated post-Brexit by the EU. Adequate data protection rules would also need to be in place. No post-Brexit scenario currently exists."

Recent years have seen the EU tighten its laws in the fight against financial crime with the adoption of new legislation like the 5th Money-Laundering Directive, which establishes a centralised public register of companies and ultimate beneficiary owners. This law brings transparency to business practices and attempts to place limits on illicit behaviour by reducing the number of shell companies.

The UK last year unveiled new draft laws which would force the offshore owners of UK property to reveal their identities or face jail sentences and unlimited fines. Overseas companies owning UK properties will be required to reveal their owners on a publicly available register. Separately, a cross-party campaign group of MPs also tabled an amendment to the Sanctions and Anti-Money Laundering Bill 2018 requiring the governments of 14 British Overseas Territories to impose public registers. Registers were due to be introduced by the end of 2020; the deadline has been extended to 2023.

"I think if Britain were to leave Europol, which is a likely possibility, the UK would lose access to intelligence-sharing through the EIS and the Schengen Information System. I think that would compound a number of problems around Brexit," says Dev Odedra, an anti-money laundering expert, who has worked with a number of leading UK retail and investment banks.

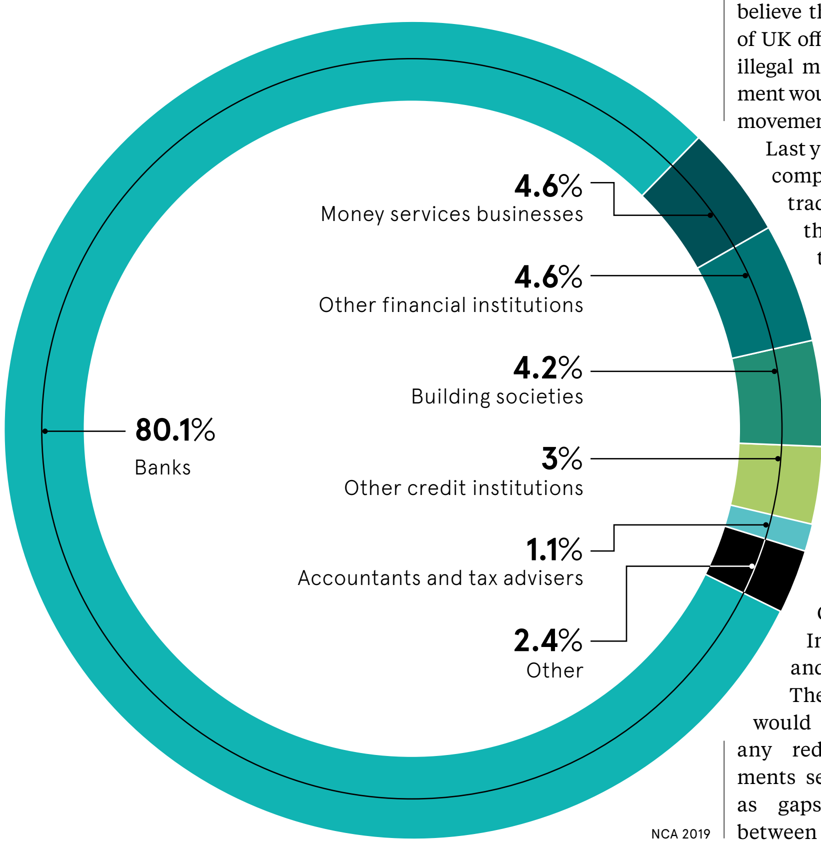
Mr Odedra says a lack of access to the EIS would impact the work of the NCA. "Broadly speaking, if the NCA were to issue notices and warnings, they would have less intelligence they could action. This is because they would be cut off from the EU's databases and anything coming down wouldn't be up to date. When it comes to anti-money laundering initiatives, access to EU registers is important if you want to tackle the problem," he says.

Another related issue is the fear that as banks move their headquarters from the UK, Brexit could encourage anti-money laundering experts to depart. "Talented people are leaving the UK out of fear," says Mr Odedra. "We may lose people with anti-money laundering skills who could go to Germany or France. We are beginning to see this as banks are deciding to move operations out of the UK to be closer to a larger market."

Much like the trade in counterfeit goods, money laundering flourishes in areas of legislative weakness. If the UK is serious about its post-Brexit ambitions, it should promptly enter into new intelligence-sharing agreements with its future trade partners.

SUSPICIOUS ACTIVITY REPORTS (SARs) REPORTED TO UK AUTHORITIES

SARs reported to the National Crime Agency in 2018 by sector; SARs are alerts to law enforcement that certain client or customer activity is in some way suspicious and might indicate money laundering or terrorist financing



NCA 2019

Commercial feature

Future of customer-centric commerce

Being a merchant in 2019 is not easy as the payments environment gets increasingly complex, says **Christopher Kronenthal,** president and chief technology officer of FreedomPay

Customers expect to be able to pay for goods and services in an ever-increasing variety of ways, while regulation increases as open banking becomes more prevalent.

It becomes a minefield of technology and data regulation; compliance with extensive legislation that takes the focus of the merchant away from what they are good at: selling or providing a service to their customers.

But for the merchants able to find their way successfully through this labyrinthine series of decisions, there is a considerable prize to be had in increased customer loyalty and higher profits.

When it comes down to it, money has the value that we as a society ascribe to it, that the central banks across the world print on it and tell us it is worth, and the value changes over time relative to other currencies and as a result of outside influences, such as inflation.

So when you think about the future of money, it is just as possible to assign value to some other sort of "currency", which could include the value of your personal data and the way in which this is used by retailers, leisure services and online sellers.

The importance of data cannot be underestimated. Merchants who are looking to maintain and grow their businesses must be aware of the increasing need to collect and use data in a way that encourages customer loyalty, ongoing interactions and sales, while ensuring the highest levels of security.

However, additional regulation and the rising requirements to ensure the highest levels of data security mean many merchants are struggling to align their interests, their customers' interests and the ability to provide sufficiently strong encryption mechanisms that can address all these needs. Going it alone for a smaller retailer, or even a larger retailer in some cases, can be so onerous that the opportunities presented by the proper use of data collection are passed by.

Introduction and implementation of the General Data Protection Regulation (GDPR), essentially the right to be forgotten, and the heinous penalties that can be applied in the case of GDPR data breaches have made it even more difficult for merchants, especially smaller firms, to get to grips with just how they can help their customers to have a better experience whenever they interact with them.

Yet customers are increasingly impatient when it comes to paying for goods and services. Many are no longer happy to wait while they have their card read, enter their PIN into a terminal, and have the system produce a paper receipt they then carry in their wallet for months and never look at again.

Instead, paying "on the fly" is increasing in popularity; using a phone to pay with systems such as Apple Pay or contactless card payments are the tip of the iceberg when it comes to developing increasingly speedy solutions to encourage customers to come back and buy again.

The Capgemini *Top 10 Trends in Payments 2019* report highlights the increasing use of digital identity as the key driver for the rise in the need for security, as an increase in fraud is expected. The survey highlighted that between 2014 and 2018 new account fraud was expected to rise by 44 per cent, with losses rising from $4 billion to $8 billion over the period.

The report says: "Increasing identity theft and scenarios such as synthetic ID fraud are spurring new defensive moves against attacks.

"Regulations such as PSD2 [Revised Payment Service Directive] combined with the open banking trend require robust measures for identity management. The European Banking Authority is encouraging risk-based authentication, wherein several layers of security must be passed to minimise violation risk."

In reality, for merchants this creates a headache of migraine proportions as they struggle to keep up to date with the ongoing and constantly changing requirements for security, while providing payment options for clients from the use of contactless cards to phones, cryptocurrencies, e-wallets and even their voice.

However, data security is just one part of the equation. Retailers for their part are also using the data gathered in these transactions to tailor the experience their customers enjoy, whether that is by identifying trends in sales, which allow buyers to get their stock levels right to maximise profits, or by identifying specific customer purchasing behaviour at particular times.

> Merchants who are looking to maintain and grow their businesses must be aware of the increasing need to collect and use data in a way that encourages customer loyalty

The use of personal data to target customers with offers and loyalty schemes they will actually engage with is also a powerful tool for retailers to wield in the constant fight to win business. You can use data analysis to identify whether someone is a good customer of yours or a bad customer, how much on average they spend with you each interaction, or each month or each year.

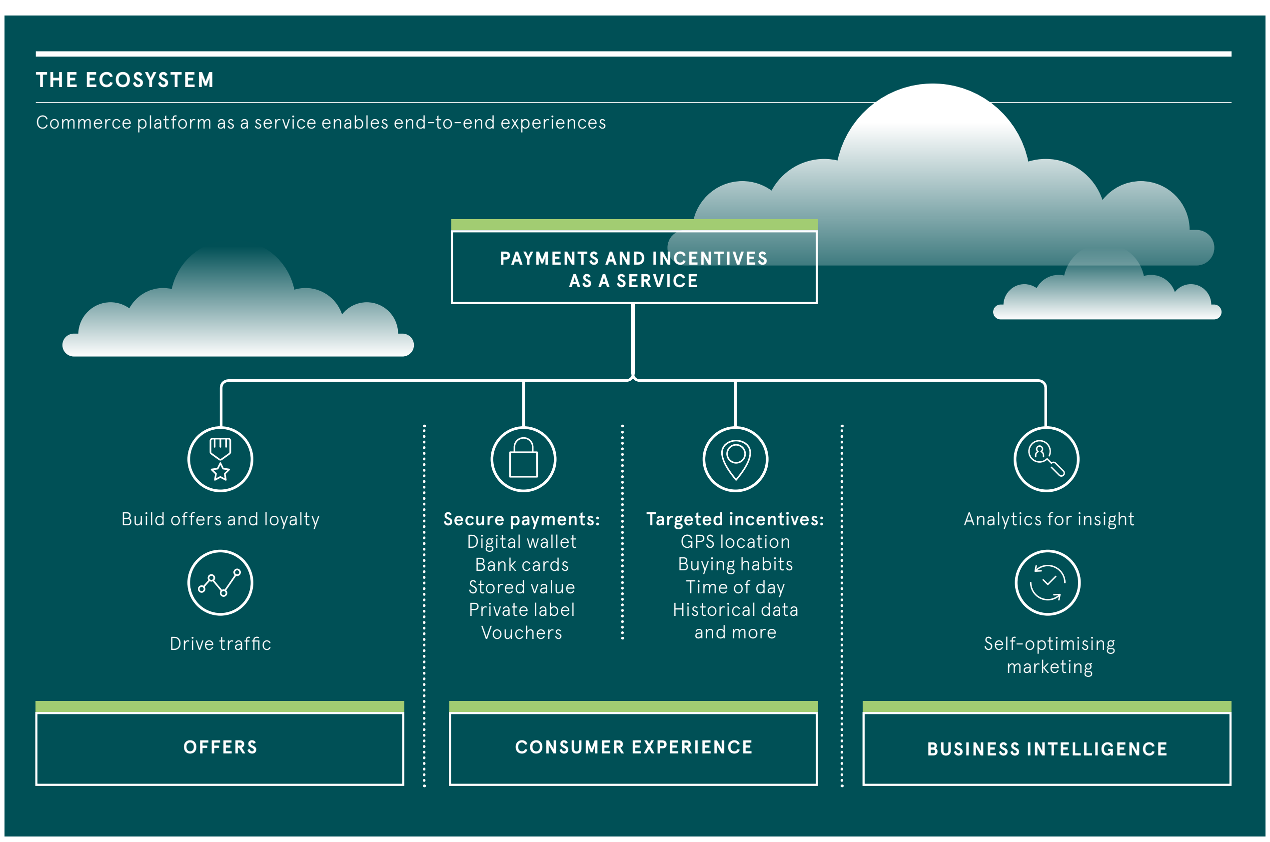
This becomes enormously powerful when you then start to use it to generate marketing that specifically targets sets of customers, whether they only buy in the winter or respond specifically to offers providing discounts over a certain level.

Consumers are becoming much more accustomed to having their needs and desires catered to at a more granular level. Advertising targeted at their interests is something that Facebook, Google and Amazon do extremely well, and as a result it is becoming more integrated into our general purchasing behaviour.

While very few businesses may have the financial clout, technical knowledge or ability to collect, analyse and then retarget data in the same way as these retail behemoths, it is not an impossible task to integrate such services into your business if you choose the right payments partner.

Resolving all these elements of the customer-retailer interaction is not easy. The best way is to use a strong, constantly updated, highly secure platform that can be integrated across a range of retail assets your company might have, everything from a point-of-sale system to an online portal.

Choosing a partner that provides a solution that can work across all sectors, with specialist data collection and analysis capabilities, and the highest level of encryption available sounds like the Holy Grail. But it really does exist.



CONCERNS ABOUT CASHLESS

The promise of a cashless society is being impeded by consumer caution. What are the main barriers that need to be overcome before individuals in the UK are ready to welcome the cashless age?

THE SHIFT TO CASHLESS

Why consumers are not comfortable with the shift to cashless, and the barriers to overcome before a cashless society could become a reality

81%

of EU consumers worry about fraud in a cashless society – a 12 percentage-point increase on 2017

Osborne Clarke 2018

76%

worry they would share too much data if cash were to be completely replaced by mobile payments

Osborne Clarke 2018

31%

of adults globally are still unbanked

World Bank 2017

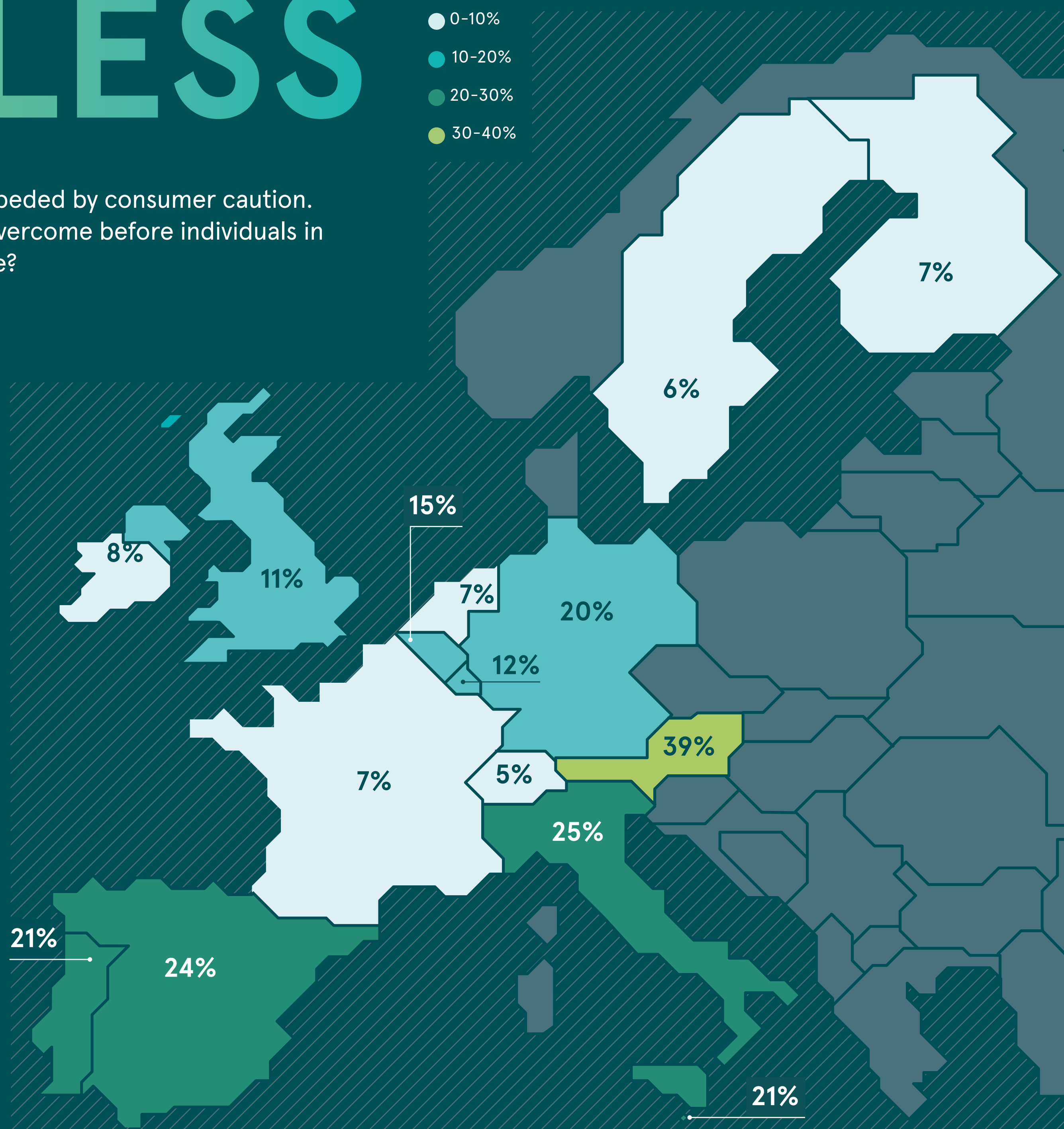
77%

of UK consumers don't consider technology companies to be trustworthy

Accenture 2018

CASH 'SHARE OF WALLET' ACROSS WESTERN EUROPE

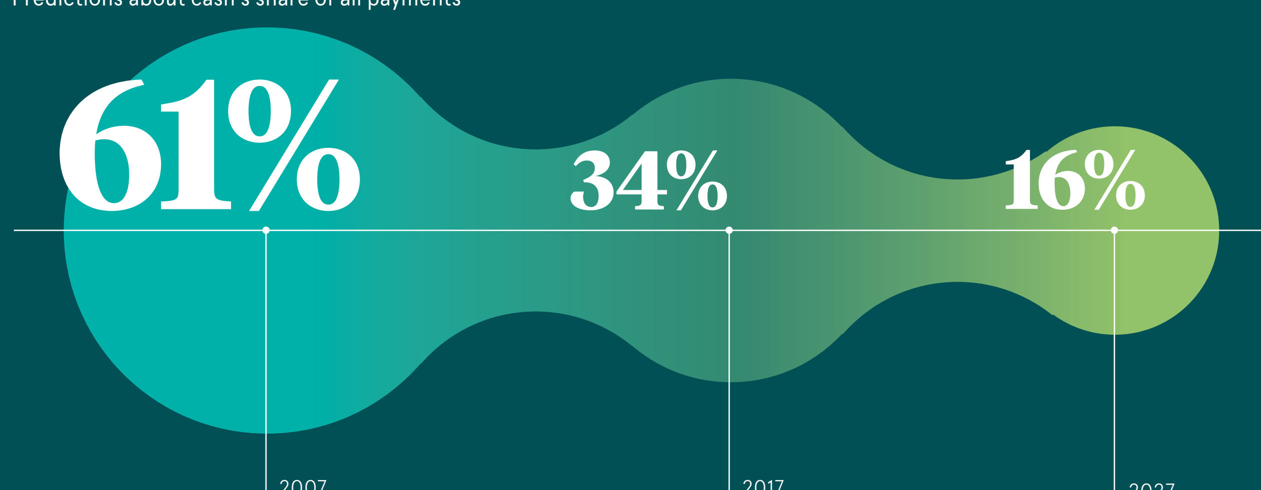
Cash share of wallet refers to the percentage of GDP that is cash-driven, as opposed to being driven by a different payment type



PYMNTS.com/Cardtronics 2017

CASH USE IN THE UK IS DROPPING

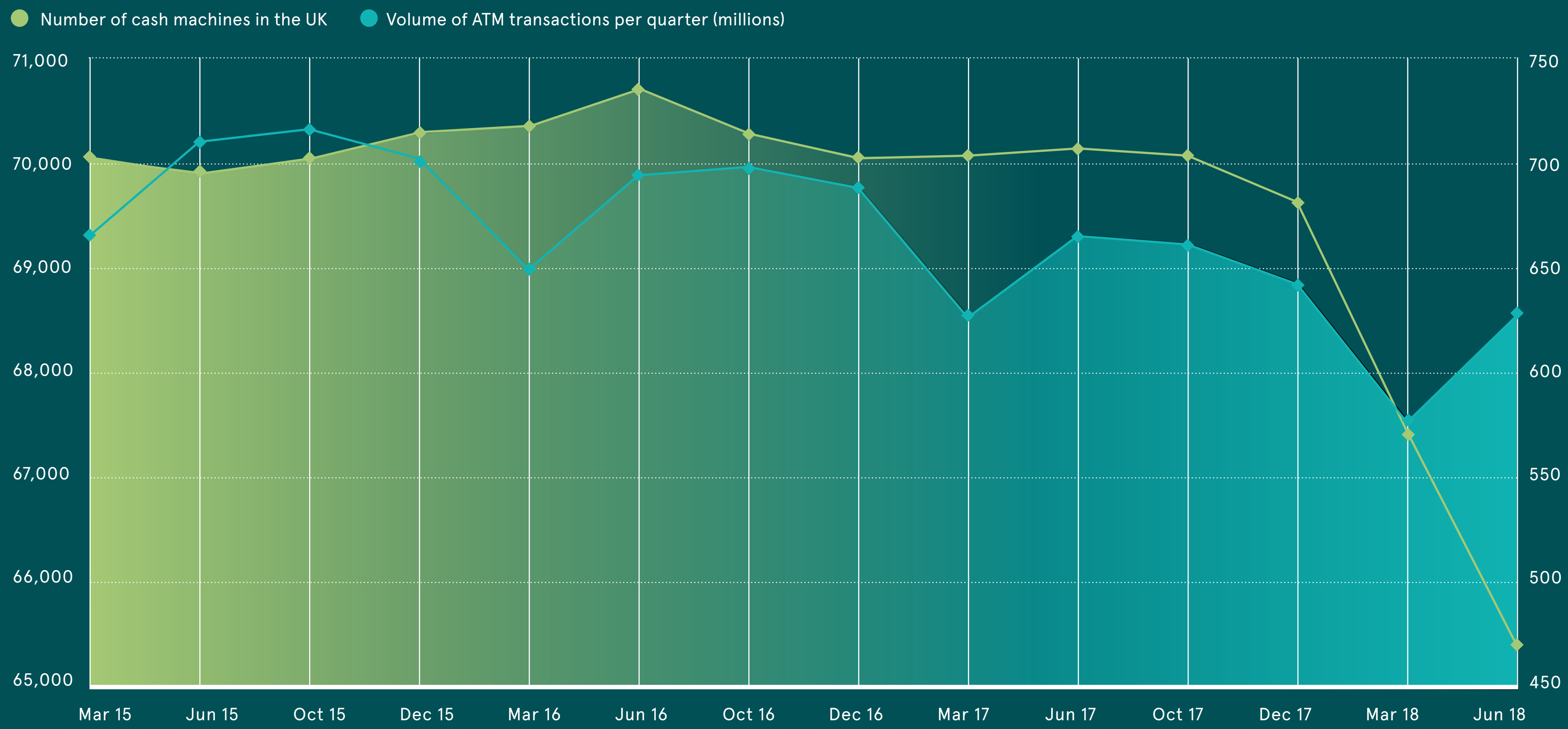
Predictions about cash's share of all payments



UK Finance 2018

ATM TRANSACTIONS IN THE UK

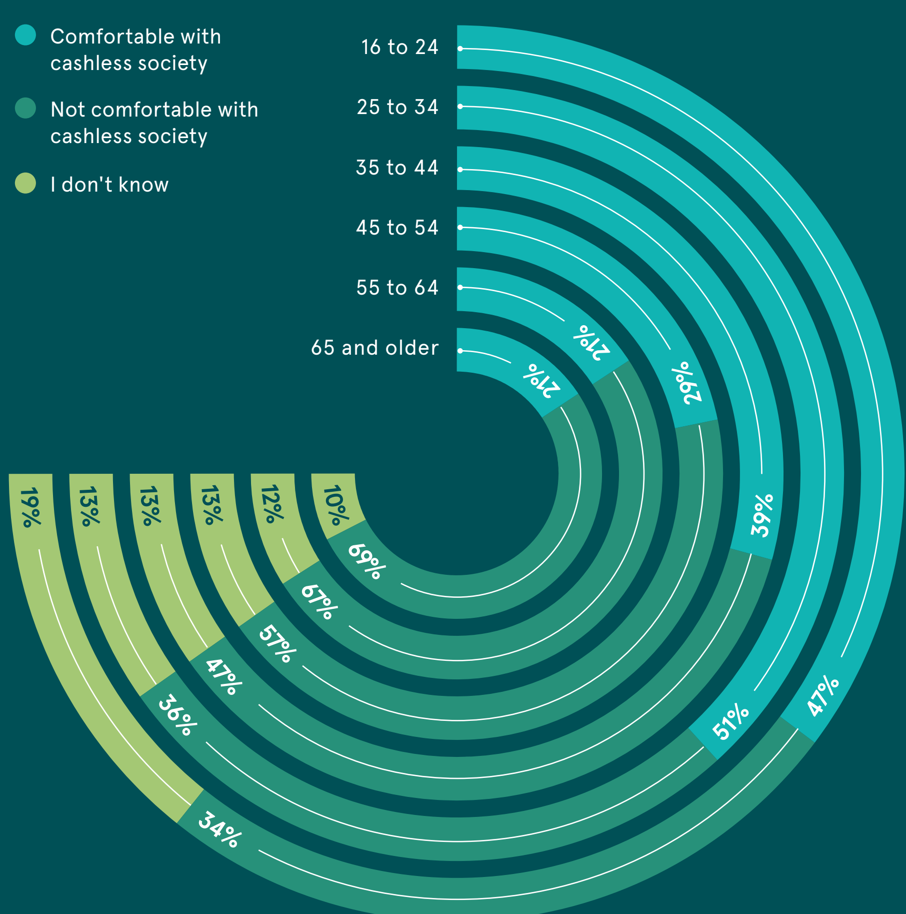
ATMs are closing around the nation in response to a shift towards cashless society, but the number of ATM transactions aren't falling at a similar rate, showing that they still remain popular



Bank of England 2018

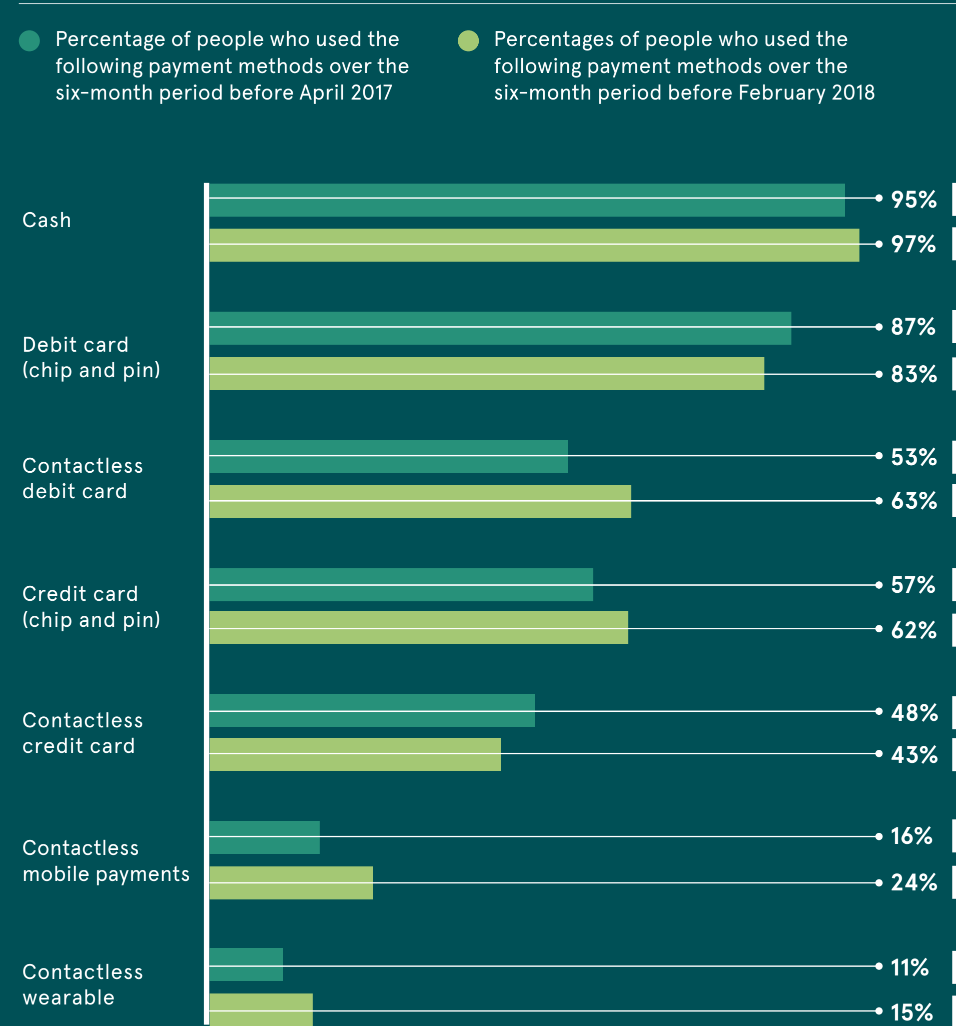
CONSUMER COMFORT ABOUT GOING CASHLESS

UK individuals aren't yet comfortable with the idea of a cashless society, and this attitude differs drastically by age



Payments Systems Regulator 2018

CHANGE IN UK PAYMENT METHODS



Payments Systems Regulator 2018


Yuri Shebalius/Shutterstock

CRYPTOCURRENCIES

What one man's death taught the world about cryptosecurity

The loss of investors' money from a cryptocurrency exchange following the death of its owner has highlighted the need for more robust business practices in a still-nascent industry

Oliver Pickup

The maelstrom generated by QuadrigaCX owner Gerald Cotten's sudden death in December, which locked away around £110 million of investors' money and in turn led to the collapse of Canada's largest cryptocurrency exchange, has precipitated a torrent of questions about safe storage and security for the industry.

Mr Cotten, who died aged 30 from complications with Crohn's disease while in India, effectively ran QuadrigaCX alone, on his personal computer. There was no business continuity in place, seemingly, to ensure the operation of the exchange should anything happen to the chief executive.

"The laptop computer from which Gerry carried out business is encrypted and I do not know the password or recovery key," swore Jennifer Roberston, Mr Cotten's widow, in an affidavit in February. "Despite repeated and diligent searches, I have not been able to find them written down anywhere."

Failure to locate the necessary codes means QuadrigaCX's users have no way to access their funds. Last month, by order of the Nova Scotia Supreme Court, the exchange transferred its remaining holdings to EY, though many investors are fearing the worst. "We don't know whether or not we're going to get our money back," says Tong Zou, who has his £325,000 life savings locked in the exchange.

Such is the risk with investing in a largely unregulated asset class and in an industry that has plenty of maturing to do, says Gavin Smith, chief executive at crypto exchange Panxora. "The QuadrigaCX situation shows that many in the crypto industry are still naive when it comes to setting up their security systems," he says, advising investors to conduct due diligence.

Iqbal V. Gandham, UK managing director of global multi-asset investment platform eToro, agrees. "The QuadrigaCX story is not about crypto, it is about poor business practices. Any business of a reasonable size should have a risk management framework in place, which covers scenarios such as key employees leaving the firm."

This is not the first time significant cryptoasset holdings have gone astray. In early-2014, the Mt. Gox exchange was handling more than 70 per cent of all global bitcoin transactions. In February that year it suspended trading and terminated its exchange service after announcing approximately 850,000 bitcoins, worth £343 million at the time, belonging to both customers and the organisation, were missing, likely stolen.

In the handful of years since then, crypto has developed more robust defences in a bid to keep cybercriminals at bay. Online (hot) and offline (cold) digital wallets offer investors another layer of security and peace of mind that their cryptos are protected. At the end of last month, it was a big moment when Samsung revealed its revolutionary native crypto wallet on the Galaxy S10 smartphone. But none of these are perfect solutions. If passwords are not known or hard drives lost then the cryptoassets will be irretrievable, as evidenced by QuadrigaCX's fall following Mr Cotten's death.

"While cold wallets are certainly the best option for protecting customer assets, the fund withdrawal process also needs to be taken into account," says Mr Smith. "Crypto exchanges would do well to take this opportunity to learn from traditional banking. They are just as capable of setting up a process where withdrawing funds requires multiple parties to sign a transaction and passwords are stored in secure offline locations. This means spreading risk throughout an organisation, preventing the actions, or the loss, of one person from compromising an entire business."

There is a growing list of examples of crypto shockers. Banking heir Matthew Mellon, for instance, died last April and left an estimated £382 million in XRP stored on Ledger Nano drives in multiple unknown locations. In 2013, Welshman James Howells accidentally threw away a hard drive containing 7,500 mined bitcoins, which would have been worth around £114 million at the cryptocurrency's peak in December 2017.

Chainalysis, an anti-money laundering software organisation, estimated last summer that more than £15 billion of bitcoin is currently lost. Little wonder a rash of cryptocurrency recovery organisations have emerged; there is even a US hypnotist in South Carolina, called Jason Miller, who charges half a bitcoin to recall forgotten keys, whether successful or not.

More certain is that simply leaving cryptocurrency in a will is insufficient. For matters of personal wealth, legal professionals have developed cryptocurrency asset planning. They include an inventory of coins, determining what is transferable to whom, structuring cryptocurrency estates and periodically revising plans.

It will be no consolation to the individuals stung, but QuadrigaCX's collapse will serve to strengthen and evolve cryptosecurity. While this latest incident is likely to further delay mass adoption, cryptoassets remain the future of money, many in the industry argue resolutely.

"Crypto gives individuals more flexibility and security in how they store their assets," says Mr Gandham. "You have the choice to store your crypto with a third party or, if you feel comfortable to do so, store it yourself. Compare this with cash; you'd struggle to safely store a million pounds in cash yourself."

Phil Mochan, founder and chief compliance officer of digital payments startup Koine Finance, concludes: "This is part of the process is flushing out the bad actors. There are over 380 trading venues and more opening all the time. There will be a significant contraction in coming years.

"The risk-taking pioneers, having staked out the new territory, need to give way to the engineers who will build solid foundations for growth. Corporate investment will continue to flow into the sector, unaffected by these events. Ultimately, cryptosecurity is not about how strong the door is, it's about who has the key and how often you open the door."

> Cryptosecurity is not about how strong the door is, it's about who has the key and how often you open the door

1/5 of all bitcoin is estimated to be lost – either forgotten or inaccessible

Chainalysis 2018

32% of traders are concerned for the security of their deposits on cryptocurrency exchanges

Encrybit 2018

67% believe private key management and storage is a strong risk in managing crypto assets

Foley & Lardner 2018

Commercial feature

Vision for payments 2020

Domestically real-time, transparent transfers are the norm. Thanks to changes in the cross-border sphere, international payments are moving the same way.

As friction between governments on cross-border trade increases, businesses need to be confident that their own international trade will be as frictionless as possible.

For corporates, the correspondent banking network has long underpinned all international trade involving serious sums of money. Having been formalised in the 1980s, by today's standards it is a relatively arcane model for transferring capital.

Consisting of manual processing, whether electronic or paper based, it was never particularly transparent. Typically a bank's customer was only informed of how a transaction was progressing if something went wrong. The perception amongst corporates was that it took two or three days to make transactions and it was difficult for them to know where their money was.

"Today we live in a world where we all expect immediacy. Knowing where your money is, is something that people take for granted. Why would a corporate be any different?" asks Harry Newman, head of banking at interbank payments co-operative SWIFT.

Opacity and inefficiency create risk for business. Trade finance is often based on short-term borrowing, while payment and goods make their way to delivery, and corporates need to know their cash flows will not be hit by any snags due to delayed or misdirected payments.

Ideally, they would see a ubiquity of service so transactions handled in a national payment system can reach anybody, globally. Furthermore, they need to have confidence that the level of oversight and control they can expect at a national level will extend to their overseas business.

Shifting regulatory frameworks

Navigating the international payments landscape requires an understanding of the terrain. Regulation is different across every jurisdiction. Dollar transactions are subject to American rules and euro transactions to European Union rules; moving between jurisdictions is not straightforward because each will have different rules.

"The terms of payments in Europe suit the European market and the terms of Americans' payments suit the American market," says Mr Newman. "You have different legal jurisdictions, different sets of currencies and then you have regulations, which can include foreign exchange controls where money can't come in without approval, and then the beneficiary has to demonstrate the money is expected."

SWIFT has found that payments which take longer than 12 hours to complete today are often either going into countries that have foreign exchange controls or between countries with big time zone differences, such as UK to Australia.

Regulation can also run in the other direction; central banks and regulators in some regions have been pushing for change-led regulation to help reduce the friction of moving money. The push towards real-time domestic transfers and increased digitisation of payments, with some Scandinavian countries even mooting the idea of digital central bank money, is creating increasingly efficient local markets.

Putting technology to work

Technology is another major dynamic helping to shape the payments industry, often in combination with regulation. The UK and EU have both enabled greater competition within financial services by mandating standardised interfaces between banks and payment service providers. The evolution of application programming interfaces, or APIs, has enabled very different systems to exchange data between one another, with no loss of information.

API use across the finance sector is transforming the insights banks have into their business. Internally, APIs enable better analysis and improvement of processes. Externally, they support a more effective, quantitative understanding between counterparties and customers, lending itself to adjusting and improving service quality.

> We've not wasted one minute in making fast, efficient and transparent cross-border payments a new reality

At the same time, cloud technology is creating new models of technology provision that work across borders and between firms. By virtualising computer resources, businesses are freed of the obligation to bulk buy hardware to support temporary demand. With cloud, huge spikes in processing demand can be handled by a third party, without the need for a bank or corporate to build a datacentre or buy rows and rows of servers. Technology-enabled suppliers can take advantage of this model to offer services to banks and corporates, which have enormous flexibility and strength.

"Technology is changing very rapidly," says Mr Newman, "but there are no silver bullets. Our approach is to continually experiment with new technology and, if it works and brings value to our customers, we put it in. There is no doubt that cloud-based services are a key enabler in allowing payment processes to speed up and become more transparent."

As SWIFT has shown, bringing the potential that technology offers into a cross-border offering can deliver the advantages found locally, at a global scale.

Reinventing cross-border payments

SWIFT, which provides the backbone for global transactions, has stepped forward to provide the technological bridge between jurisdictions. As a network that links banks, it has tapped into the digital zeitgeist to use the latest technology in building a service, SWIFT Global Payment Innovation (gpi), which has revolutionised payment life cycle management.

So far it has delivered significant efficiencies. More than $300 billion is now sent daily via gpi, with 50 per cent of SWIFT gpi payments delivered within 30 minutes and 40 per cent credited within five minutes, many in just seconds. For the firms driving global trade this creates real advantages.

"Efficiency reduces capital usage and stock time, which has a material impact on business," says Mr Newman. "There are real economic, as well as user-experience, benefits to faster and more transparent operations, and that's what we are here for, to make the flow of money work better."

To date, SWIFT gpi has been adopted by more than 3,500 banks globally. By 2020, all banks will be able to track and confirm all their payments from end to end.

"We have enabled the entire correspondent banking network to track payments across thousands of institutions. This means that, at any time, your bank can tell you where your payment is, when it will arrive on your account and how much it costs," says Mr Newman. "To have real-time information like this across all your flows is very powerful for banks and corporates."

Vision for 2020 and beyond

SWIFT is on track to see the service become universally adopted by 2020 and is also working on a number of innovative ways to expand it. Instructing banks, for example, will soon be able to pre-validate payment instructions to correct errors before they are sent and, on the receiving end, beneficiary banks will gain increased visibility on incoming payments so they can better manage liquidity.

SWIFT gpi is also expanding into new markets. Having already linked into local real-time payment platforms in Asia-Pacific, achieving end-to-end times in under a minute, SWIFT will start to roll this out in other regions as well. And it is working with blockchain-based ecommerce platforms to provide secure, reliable payment settlement via gpi using fiat currency.

"The complexity of bringing the full industry together around a single ubiquitous solution has been significant," says Mr Newman. "But there was no time to lose and we've not wasted one minute in making fast, efficient and transparent cross-border payments a new reality."

For further information please visit www.swift.com/gpi

SWIFT

SWIFT gpi:
TRANSFORMING CROSS-BORDER PAYMENTS

$40trn+
sent via gpi in 2018

$300bn+
sent daily via gpi in 148 currencies across more than 1,100 country corridors

3,500+
banks committed to adopting

50%
of gpi payments credited to end-beneficiaries within 30 minutes, almost 100 per cent within 24 hours

DIGITAL COINS

Pros and cons of digital fiat money

The concept of central bank digital currencies has drawn both outright condemnation and enthusiastic support for its profound ramifications for payments, monetary policy and financial stability

Sarah Rundell

For

Enthusiasts say central bank digital currencies (CBDCs) will restrict illegal activity and bring more business activity into the tax net. Central banks would be able to create a "regulatory tent" over their digital currencies, says Bank of England governor Mark Carney. This is in contrast to bitcoin and its siblings, which operate beyond official financial systems and can fund illegal activity using encryption to mask transactions that could involve money laundering or terrorist financing.

Central banks should issue digital currencies to safeguard financial inclusion and boost competition. Christine Lagarde, head of the International Monetary Fund, recently re-emphasised the argument that governments need to supply money to the digital economy to "fill the void left by the decline in cash" and "stop too much power" falling into the hands of private payment providers.

The less we use physical cash, the more reliant we become on private financial institutions to manage our money and with that comes exposure to the risk of exclusion from basic services. Think TSB's IT meltdown last year and the financial crisis when people lost faith in private money and the government had to step in. In short, it's key to central banks keeping control over the financial system and staying in the game of wholesale and retail payment systems.

Proponents also argue that CBDCs would build on the transformative role electronic payment systems have made in poor and rural economies where financial inclusion is low because access to cash and bricks-and-mortar banks is difficult.

CBDCs would spur innovation and create competition in payment and current account provision, currently dominated by the big banks. "It would break big banks' stranglehold over the payment system," says David Clarke, head of policy and advocacy at Positive Money, a not-for-profit campaigning and research organisation, who predicts CBDCs would allow tech firms and startups to step into the payment space and innovate in a way big banks don't. "Banks are sitting on legacy infrastructure and are too big to innovate around payment services," he says.

It could also work out better for consumers. A digital current account with the central bank would do away with bank accounts and cards and all the associated fees banks' charge for payment services.

Enthusiasts say CBDCs will transform monetary policy for the better. Forget central banks using interest rates as their key monetary-policy tool. Imagine instead, the Bank of England making small and occasional "helicopter drops" of newly created digital cash to every citizen to stimulate spending. It heralds a more accurate and direct method of implementing monetary policy than tweaking interest rates, particularly if banks don't pass rate cuts on to customers.

"A CBDC could mean that any adjustment of interest rates would have a more immediate effect because it would happen directly and not have to be passed on by a bank," says Mr Clarke.

CBDCs are touted by some academics as a way to extend the reach of monetary policy even further. If people had deposit accounts with, say, the Bank of England or US Federal Reserve, these could impose negative interest rates, by charging a fee to depositors rather than paying interest, during an economic downturn. This could stimulate recovery in way the central banks were unable to do during the financial crisis.

"Under these conditions the central bank could gain greater control over the transmission of interest rates to households and businesses. In a deep recession, it could reduce interest rates by more than is currently possible and stabilise economic activity more quickly, reducing the need for other non-conventional measures," according to Benoît Cœuré, a member of the executive board of the European Central Bank.

> "In a deep recession, central banks could reduce interest rates by more than is currently possible and stabilise economic activity more quickly, reducing the need for other non-conventional measures

Against

The downsides of central bank digital currencies (CBDCs) are just as compelling. Digital currencies could create financial instability by disrupting banks' business models and taking commercial banks out of retail payments.

This is a key worry for the Bank for International Settlements (BIS), the club of the world's largest banks, which recently warned that "a central bank digital currency could allow for digital runs towards the central bank with unprecedented speed and scale at the click of a button". The concern is that in times of instability, customers will rush to move funds out of traditional bank accounts to ecurrencies, causing bank runs.

Similarly, CBDCs could trigger much more volatile transfers of money across borders during times of instability to safe-haven, state-backed cryptocurrencies. However, proponents respond that consumers will still use banks for other deposits that pay interest. Central banks could also introduce limits or use interest rates to influence how much people can transfer between their traditional bank and digital account, they say.

Privacy is another problem. A CBDC would leave a traceable digital footprint, holding none of the anonymity of cash. Features in the currency would identify users, allowing governments to track every payment right down to buying a cup of coffee, yet people want and expect some privacy in their financial dealings.

Another challenge is the infrastructure CBDCs demand. As well as the small, advanced economies like Sweden and Singapore that lead on CBDC innovation, a handful of other emerging markets are also developing the concept. A survey by the website Cointelegraph lists China, Dubai, Iran, Venezuela and Uruguay as countries currently experimenting with and researching CBDCs.

One worry is that these emerging economies lack the technological infrastructure, regulatory capacity and government institutions necessary to support a digital currency. The BIS recently flagged that some central banks don't even have the legal authority to issue CBDCs.

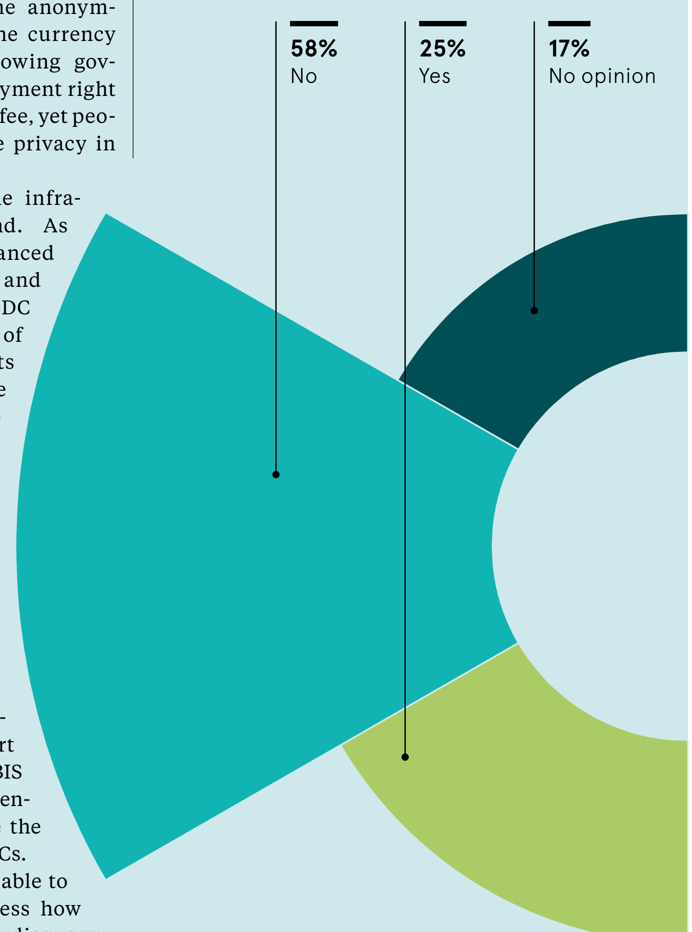
Governments need to be able to control the process. Witness how the pace at which cash is disappearing in Sweden has authorities worried because many people, particularly the elderly and vulnerable groups, don't have access to digital currency. The Riksbank has urged for change "at a rate that does not create problems for certain social groups or exclude anyone from the payment market". Meanwhile the bank's governor Stefan Ingves has argued that phasing out coins and notes could put the entire country at risk should Sweden encounter a serious crisis or war.

Nor is there any global uniformity or leadership to the process. The world's biggest advanced economy central banks, the US Fed, the European Central Bank and the Bank of Japan, have taken a step back. In Europe cash is hardly used in Sweden, but is still the payment norm in Germany and Switzerland, where there is much less public demand for electronic payments.

As the debate continues to play out, expect the front runners to lead on developing proof of concept. And the sign "We don't take cash" to appear more frequently in shop windows.

CRYPTO TRADERS MOSTLY AGAINST CBDCS

Whether cryptocurrency traders believe sovereigns or central banks should create their own cryptocurrencies



Foley & Lardner 2018

LENDING

Fintechs and banks battle in SME lending revolution

Are emerging fintechs levelling the playing field with high street banks in the SME lending market?

Sabuhi Gard

Digital lending has the potential to transform the fortunes of many small and medium-sized enterprises (SMEs) in the UK, but it is the fast-growing fintech startups that are giving high street stalwarts a run for their money in this lucrative area.

Eight out of ten SME loan applications were approved by banks in the third quarter of 2018, according to the latest figures from trade association UK Finance. While this is a far cry from the days of the global financial crisis, when SME lending all but dried up in part due to regulatory pressures to shore up capital, smaller companies are still citing challenges in securing funding from traditional players, according to Stuart Chalmers, commercial banking lead for Accenture UK.

New digital-first lenders have "changed the nature of how lending should be offered", says Mr Chalmers. In response, banks have invested in digital lending for smaller businesses, often through white-labelled services with digital lenders themselves, focusing on reducing the overall time money can get into an SME's account from the point of interest. "We are seeing banks getting much better at this," he says.

Nevertheless, the alternative finance sector is thriving, with the latest report from the Cambridge Centre for Alternative Finance (CCAF) showing that the industry in the UK grew by over a third in 2017 to £6.2 billion, 68 per cent of which was for business funding.

Almost 30,000 companies used non-traditional channels over the year, with peer-to-peer lending and equity-based crowdfunding now established investment vehicles for seed, startup, early-stage and fast-growth companies seeking capital. In fact, CCAF estimates that 29 per cent of all new loans issued in 2017 to small businesses with annual turnovers less than £2 million came from alternative finance.

One such lender is Iwoca, which last month raised £150 million itself in equity and debt capital, taking total fundraising to £350 million. The company can offer instant funding to SMEs without the need for complex paperwork, using machine-learning to assess automatically a business's performance by linking its online accounts, such as eBay and PayPal, or uploading bank and tax statements.

Operating across the UK, Germany and Poland, Iwoca has lent almost £800 million to more than 25,000 small businesses since its inception in 2012 and says it is on track to fund 100,000 SMEs over the next five years.

Tom Werner/Getty Images

"Alternative finance lenders have been able to capitalise on digital opportunities and have reduced the 'time to cash' from months to minutes," says Josh Levy, chief executive at SME funding partner Ultimate Finance.

"Where previously SMEs were left waiting for financial support during testing times, they can now access the funds needed within the hour, helping them to flourish even when unforeseen difficulties crop up."

There is also a trend towards full automation in the area of SME loans and lending, says Igor Pejic, author of *Blockchain Babel*. "It is simply not possible to offer the customers the speed they need in today's economy with manual processes," he says.

Mr Pejic says fintechs "have this automation in their DNA", unlike the more traditional lenders. He says: "Some even report that automatic algorithms are already better at predicting defaults than manual human processes."

> **Alternative lenders understand the hunger for a seamless customer experience and have built credit journeys that align to business expectations**

Cross-border lending will also help SMEs see a massive improvement in terms of the cost of loans and their duration, especially due to technologies such as blockchain, he adds.

"Alternative lenders understand the hunger for a seamless customer experience and have built credit journeys that align to business expectations," says Mr Levy. "Traditional banks are following suit, but have faced the challenge of larger legacy systems and processes."

After all, it is a lucrative market, given the explosion in the number of SMEs over recent years. At the end of 2018, there were 5.7 million SMEs in the UK, an increase of 1.4 million over the past ten years, according to official statistics.

So how will initiatives such as open banking and the Second Payment Services Directive, or PSD2, through which banks are required to provide third parties with access to customer account data, affect competition in the SME lending market?

In November, a beauty salon from Kent became the first company to be granted a loan using open banking data. Through business finance aggregator Funding Options, which gathers up to 40 datapoints on how a company is performing, the salon was able to obtain a £10,000 loan from Iwoca in just 83 minutes.

According to Funding Options chief executive Conrad Ford, open banking is starting to "make a real difference at the grassroots level to UK business" and alternative lenders are "ready to deliver much-needed funding" for the SME community.

"Every business is individual, but the process of accessing finance until now has been standardised; a perennial absurdity is that SMEs end up scanning their paper bank statements, only for the data to be manually re-entered into the underwriting systems of modern online lenders," Mr Ford says.

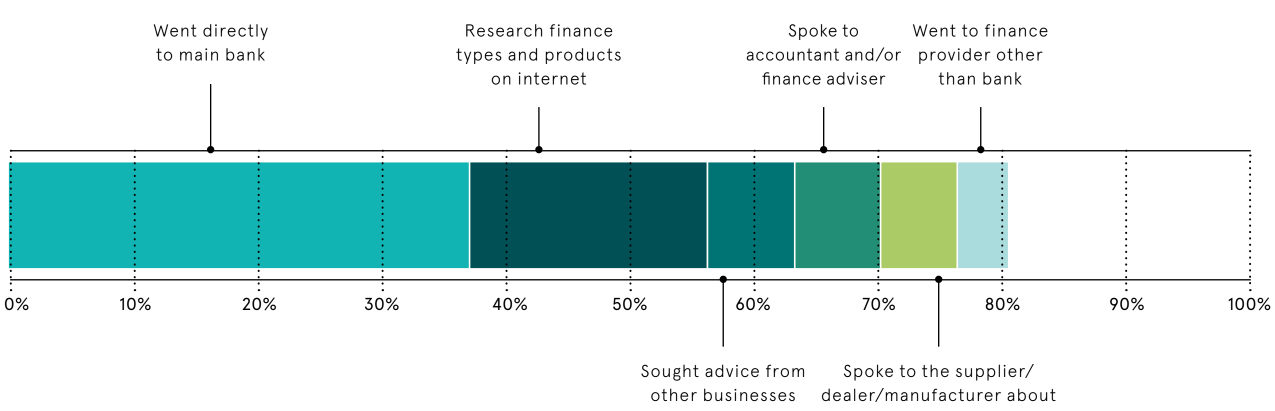
Funding Options is also one of the three designated finance platforms operating under the government's Bank Referral Scheme. Launched in 2016, the scheme requires banks to offer to refer unsuccessful applicants for credit to a designated platform, which then works to find those business funding from alternative lenders.

Nevertheless, the economies of scale could just be enough for banks to secure a bigger piece of the lending pie, according to Artem Popov, co-founder of international investment platform Roobee. He says: "High street lenders can take advantage of increasing access to customer data and new technologies to offer digital products at increased scale.

"Banks have an advantage as they can offer low interest rates in comparison to some of their competitors. They also have a reputational advantage as consumers trust them."

WHERE SMEs TURN WHEN IN NEED OF FINANCE

The first thing SMEs did when they had a financing need; percentage of all who have sought finance in the past three years



British Business Bank 2019

OPINION

'The concept of completing every transaction with one app may sound farfetched, but this convergence is already happening'

How will we conceive of money in the future? My answer is a tale of digital convergence and how we will increasingly begin to spend, save, manage, borrow and share money on one trusted platform: a single app on our smartphone.

In the crowded world of paper, plastic, loyalty points, online banking, digibanks and crypto wallets, the concept of completing every monetary transaction with one app may sound farfetched, but this convergence is already happening in Asia and it's a trend that is taking on the world.

I spent much of 2018 travelling around the financial and tech hubs of Asia, and I've observed this convergence that is set to shake up banking, commerce and social messaging in one fell swoop. This trend is being driven by tech giants, predominantly from China, that are now offering an ever-increasing range of both financial and non-financial services through a single app. These apps combine communication, search, navigation and commerce into a single platform integrated via a frictionless payments layer, referred to as a superapp.

In China, there are two superapps that rule them all. First there's the largest fintech in the world, Ant Financial, which originally span out of the ecommerce giant Alibaba and is now valued at $150 billion, having raised 35 per cent of all fintech funding worldwide in 2018. Then there's Tencent's social messaging platform WeChat that has more than a billion monthly active users globally.

Now this superapp model is spreading beyond China. Singaporean Grab, the ride-hailing platform that acquired Uber's Southeast Asian business in 2018, has also been expanding its app's capabilities into financial services, from payments to lending to insurance.

As these superapps continue to offer a wider range of their own and third-party services, they are reaching hyperscale by creating seamless, integrated, contextualised and efficient experiences for users. And this means the parents of these superapps, the ecommerce, social media and on-demand giants, are beginning to blur the lines between a consumer's social life, retail life and financial services life, and the implications for incumbent financial institutions is huge.

But is this phenomenon unique to Asia, where there has arguably been a lack of retail and financial services available for digital consumers?

Time for a personal story, which may sound familiar. I rarely make phone calls via a mobile network, I don't send text messages, I'm a passive Facebook user and I seldom read an online newspaper, let alone pick up a physical newspaper. Yet I speak to friends and family a great deal over the phone, I send multiple messages a day, I receive photos and news of how my friends and family are doing, and I keep up to date on the latest news. I already use one app for all of this and it's WhatsApp. Already the services from companies I relied upon on a daily basis less than three years ago, I use much less of, if at all.

So how long will it be before the tech giants we already rely on in Europe successfully integrate payments functionality into their offerings? Or will it be the behemoths from the East that take over our social, retail and financial lives? Either way, where do the incumbent banks fit in this model? These new superapps increasingly hold the relationship with the banks' customers and, most importantly, their data. ●

Pat Patel
Global content director
Money 20/20

MONEY OUTLOOK

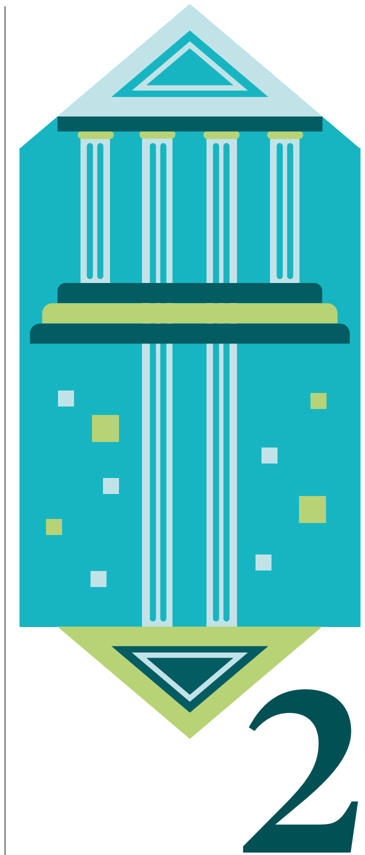
Five predictions for the future of money

Financial experts discuss what the future holds for money, exploring how traditional forms of capital and how we use them will evolve in the years to come

Ian Fraser

The end of cash

Most developed economies are rapidly moving towards becoming cashless societies. In the UK, only 30 per cent of payments are now made using notes and coins, and that is expected to fall to 10 per cent by 2034. In Sweden, Europe's most cashless society, notes and coins account for just 2 per cent of transactions by value. South Korea is planning to phase out cash completely in 2020. Paul Amery, founding editor of *New Money Review*, says: "Cash will have completely disappeared in five years' time. It's happening far more quickly than most people expected or central bankers feel comfortable with." However, a cashless society won't necessarily be a Utopia. Older people, those who are mistrustful of technology, those who live in remote areas with poor connectivity and those concerned about loss of privacy risk being marginalised. Even though they are more convenient and safer to use, and cheaper for the financial sector to operate, digital payment infrastructures are more vulnerable to cyberattacks and technological outages than cash. In terms of the psychology of money, there are fears cashless payments could cause consumer debt to spiral. *The Financial Times* has identified "a worrying correlation" between countries with the highest proportion of electronic payments and those with the highest levels of personal debt. However, Ed Maslaveckas, chief executive of financial network Bud, says a cashless society should mean less fraud and crime. "It is much easier for someone to steal £50 from you than to steal your digital identity," he claims.



Banks lose out

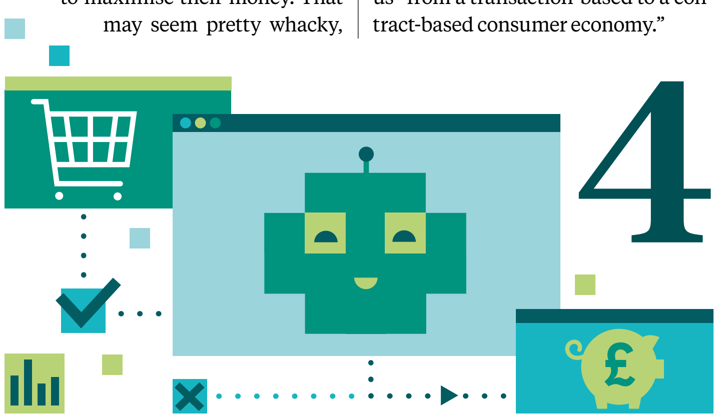
Banks will lose their exalted position at the top of the financial food chain. While they are likely to continue to handle credit issuance, they will have increasingly lost their grip of the payments side of banking, echoing what is happening in China with the rise of payment powerhouses Alipay and WeChat Pay. *New Money Review* editor Mr Amery says: "Traditional high street banks are basically finished. They will be replaced by payment apps. They will, however, stick with credit provision. Divorcing the payment part from the credit part of banking is a huge socio-economic development that takes us away from the fractional reserve banking that we've all grown up with." Eswar Prasad, professor at Cornell University, New York, and senior fellow at the Brookings Institution, Washington, believes banks will find it difficult to continue "collecting economic rents" from activities that have traditionally cross-subsidised their other activities. Bud chief executive Mr Maslaveckas says: "We're seeing a global shift in banking from product led to platform based. We're already seeing the rise of platform-based banking in China, and we're beginning to see platformisation in the UK and Europe, where it's being driven by consumer expectations and by open banking." He predicts there will be up to six platforms globally, only a few of which will have started out as banks. "The hope is this will decrease profit margins on products, but increase the benefits for customers," says Mr Maslaveckas.

Currencies multiply

Instead of monolithic currencies, such as the euro and dollar, consumers will have an array of much narrower currencies to choose from. University of Edinburgh chair of design informatics Professor Chris Speed believes the world is moving away from transaction-based currencies to contract-based ones. "Each consumer will be using at least four or five other active currencies, over and above sterling or euros," he says. "There might be a Tesco currency, which constitutes people's contract with Tesco and which will probably require them to share more data. With a little bit of creativity you can actually begin to disempower the state and central banks." *New Money Review* editor Mr Amery says: "We're going to be carrying a much greater diversity of currencies and near-cash in our mobile wallets, including loyalty money, cryptocurrencies and so on." It is also possible that in a cashless society, governments will start issuing national cryptocurrencies, an idea that International Monetary Fund managing director Christine Lagarde endorsed in her Winds of change speech in Singapore last November. "That would take a hell of a lot of cost and transaction cost out of economies," says Bud's Mr Maslaveckas. "They will look and feel like a fiat currency, but be controlled by governments." The world's central banks face a dilemma, though. If they move too fast, they could trigger a run on conventional banks. If they leave it too late, fiat money could have been supplanted.

Open APIs will transform banking

Instead of the "military-industrial complex" of which President Eisenhower warned in 1961, we will see the rise of a "financial-consumer-goods-and-services complex", in which banking and non-banking data are melded into a hyper-personalised ecosystem built on open application programming interfaces (APIs) and artificial intelligence. Consumers' needs will be predicted, affordability checks automated and money-saving prompts engineered. Ed Maslaveckas, chief executive of Bud, says: "We'll see the rise of funky AI stores building bots which will automate a bunch of your money. I think we'll see an AI version of Money Saving Expert's Martin Lewis helping people find these little hacks in order to maximise their money. That may seem pretty whacky, and also potentially dangerous. They will obviously need to trust the bots but the question is – how will regulation develop to ensure that people are protected?" Mr Maslaveckas predicts a single platform could have 50 million customers who are on "a certain plant-based diet". The platform would then effectively become a mass-market retailer, dominating the sourcing and supply of the relevant products at as low a cost as possible. He also predicted consumers will become less obsessed with ownership, for example of cars – as the economy will move to a pay-as-you-go, or subscription-based model. Edinburgh University's Chris Speed cites the example of Vitality Insurance – which has adopted an incentive-based model in which consumers' premiums are reduced if they adopt a healthy lifestyle – as proof that open APIs and smart devices will take us "from a transaction-based to a contract-based consumer economy."



Programmable money

In a cashless society, money will come with more of a purpose attached. Using so-called smart contracts, these focused currencies will ensure payments are only released if they are being made to a vetted and accredited supplier. Existing examples, which have been developed to support and sustain specific lifestyle choices and ensure funds are channelled into, say, more ecologically ways of living, while enhancing supply chain transparency, include VeganCoins, a cruelty-free cryptocurrency introduced in March 2018, and FairCoin, a social cryptocurrency launched in 2014. Isaac Thomas, co-founder and chief executive of Vegan Nation, the organisation behind VeganCoin, says the cryptocurrency aims to build greater solidarity among the world's 300 million vegans and make the vegan lifestyle more accessible. "In today's digital age, individuals from around the globe can unite to create more than just a community, but a nation to create change." Edinburgh University's Professor Speed says: "VeganCoins are capable of remembering where they have been and can be programmed so they only go to vegan spaces." FairCoin, which emerged from the Catalan Integral Co-operative, was created as an eco-friendly, post-capitalist cryptocurrency. Backed by the FairCoop ecosystem, it aims to develop a circular economy in which the different parts of the production and distribution process can each be paid for in FairCoin in environmentally sustainable ways. There are parallels with hyper-local digital currencies, which are only redeemable within their own cities, or whose value falls if they are spent outside these areas.