CARDS

INTERNATIONAL



INSIGHT

Digital currencies: the way of the future or unsound and untrustworthy?

FEATURE

Explosive attacks on ATMs lead to renewed questions about their future

COUNTRY SNAPSHOTS

Key payments market data and analysis for Spain, Norway and Turkey

THIS MONTH



Editor

Douglas Blakey +44 (0)20 7936 6858 douglas.blakev@verdict.co.uk

Senior Reporter:

Mohamed Dabo +44 (0)20 7936 6997 mohamed.dabo@verdict.co.uk

Reporter:

Evie Rusman +44 (0)20 7936 6975 evie.rusman@globaldata.com

Group Editorial Director:

Ana Gyorkos +44 (0)20 7832 4396 ana.gyorkos@globaldata.com

Sub-editor:

Nick Midgley +44 (0)161 359 5829 nick.midgley@uk.timetric.com

Publishing Assistant:

Asena Değirmenci +44 (0)20 7936 6969 asena.degirmenci@verdict.co.uk

Director of Events:

Ray Giddings +44 (0)20 7936 6512 rav.giddings@compelo.com

Head of Subscriptions:

Sharon Howley +44 (0)20 7936 6587 sharon.howley@verdict.co.uk

Customer Services: +44 (0)20 7936 6587, briefings@verdict.co.uk

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London office: John Carpenter House, John Carpenter Street, London, EC4Y OAN

Asia office: 1 Finlayson Green, #09-01, Singapore 049246 Tel: +65 6383 4688, Fax: +65 6383 5433 Email: asiapacific@sg.timetric.com







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MARCH 2020



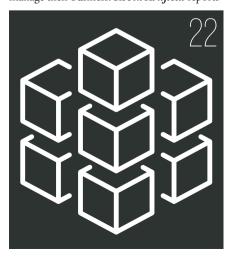
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CONTACTLESS CHARGES GO MAINSTREAM IN IRELAND



Douglas Blakey, Editor

IB is to start charging retail banking customers for contactless card payments. The AIB fee may only be €0.01 to tap and go, but will be unpopular - or 'tap and pay', as critics will claim.

The Irish banks will get away with it, at least for the meantime, but one can write the script if UK banks try to follow suit: the tabloid press would be in uproar, and one could foresee questions being asked by the Treasury Select

To be fair to AIB, it is simply following the lead set by rivals Ulster Bank and Bank of Ireland, both of which apply similar charges for contactless payments. AIB is also set to charge customers a quarterly current account fee of €4.50 from May.

Ireland has some of the most expensive mortgage rates in Europe, and increasingly, it is becoming more expensive for current accounts - certainly compared to the UK. For example, AIB is to charge €0.35 per ATM withdrawal, while over-thecounter transactions cost €0.39.

Fees are also rising at RBS subsidiary Ulster Bank, Branch payments at Ulster Bank will cost €0.80 from April, up from €0.20. Customers making payments online or via its mobile app are charged €0.20. At Ulster Bank and Bank of Ireland, customers with a minimum balance of €3,000 are exempt from transaction fees. However, the maintenance fee - €2 per month at Ulster - still applies.

Low switching rates, Irish market ripe for disruption

AIB is following the same lead here. At present, AIB does not charge maintenance fees for customers with a minimum balance of €2,500. That is set to end, with all customers charged a quarterly fee of €4.50. For customers aged 66 and over, however, no maintenance or transaction fees apply. Furthermore, customers who pay their AIB mortgage from an AIB current account avoid these fees. Moreover, AIB student accounts, graduate accounts and Basic Bank accounts remain free of charges.

Current account switching rates in the Republic of Ireland, around 1% per year, are even lower than in the UK. The Irish current account market is ripe for disruption, and a former AIB leader has it in her sights. The formidable Anne Boden, founder of Starling Bank, knows the Irish market well from her time as AIB's COO. Starling plans to launch in Ireland in 2020. To date, Starling has met or exceeded its targets since launch; it is also months ahead of its peer Monzo in terms of the roll-out of business accounts.

Starling will not be entering the Irish market to make up the numbers. It would be unwise to bet against it making a splash when it launches, and it will be very interesting to take note of its fees and charging structure. It may only be €0.01 that the incumbent issuers are charging, but it is a fair bet to suggest that Starling will not charge for contactless.

Mastercard boosts initiative to speed development and access to Covid-19 therapies

Well played Mastercard. Almost every bank and card issuer of any consequence has a comprehensive corporate social responsibility strategy, but few CSR initiatives deserve to be highlighted as readily as the Gates Foundation, Wellcome and Mastercard coronavirus programme. The three parties are committing to \$125m in seed funding to speed up the response to the Covid-19 pandemic.

The Covid-19 Therapeutics Accelerator will play a catalytic role by accelerating and evaluating new and repurposed drugs and biologics to treat patients with Covid-19 in the immediate term, and other viral pathogens in the longer term. Specifically, Mastercard has committed up to \$25m to catalyse the initial work of the accelerator.

As CI goes to press, there is also encouraging evidence of both Mastercard and Visa supporting female entrepreneurs. Visa, for example, is working with Hand in Hand International and IFundWomen. Meantime, Mastercard has launched a new initiative Path to Priceless designed to reaffirm the company's commitment to women entrepreneurs.

Through the programme, Mastercard has curated a calendar of physical and digital advisement and mentorship opportunities for women business owners. Hopefully, it is just a matter of a few days before Visa reveals how it plans to support efforts to target the Covis-19 pandemic. ■

GET IN TOUCH WITH THE EDITOR AT: DOUGLAS.BLAKEY@VERDICT.CO.UK

NEWS DIGEST

VISA LAUNCHES GRANT PROGRAMMES FOR IWD



Visa has announced partnerships with Hand In Hand International and IFundWomen to provide educational resources and funding for women entrepreneurs.

Visa's new alliance aims to help women around the world to build and grow their businesses. The announcement coincides with International Women's Day (IWD) on 8 March, which this year celebrates the theme #EachForEqual.

Visa CEO Al Kelly said: "Women power economies around the world and increasingly are a driving force in the creation of new businesses. Visa is committed to using the full power of our network, brand and financial resources to put a spotlight on this growing economic force and help female entrepreneurs achieve their dreams."

IFundWomen is a funding and education platform that provides access to capital through grants and crowdfunding, and business coaching. Through its partnership with Visa, entrepreneurs can secure funding through a series of grant contests.

Visa has also launched a \$2.4m, threeyear partnership with Hand in Hand International, an organisation that focuses on helping developing economies. Visa will focus on providing business education and financial services access to 10,000 micro businesses in Kenva, of which 75% are owned by women, according to Visa.

Visa has previously taken a number of initiatives designed to improve gender equality. In 2017, it granted \$20m to Women's World Banking to help womenled small business owners increase access to capital and grow their businesses.

Visa also launched its women-owned small business initiative, She's Next, Empowered by Visa, which held workshops in New York, Atlanta, Toronto and Cape Town. Its aim is to empower women entrepreneurs with tools to build their businesses and create a ripple effect throughout their communities.

The payments giant also has experience in investing in female athletes. Visa is supporting over 50 female Olympic and Paralympic hopefuls from around the world for the 2020 games in Tokyo. ■

Fingerprints expands biometric software for access control

Biometrics company Fingerprint Cards AB (Fingerprints) has expanded its Biometric Software Platform for access control solutions.

Fingerprints has tailored its payments software to support access control device makers, card manufacturers and system integrators by adding biometric authentication.

Michel Roig, SVP for payments and access at Fingerprints, said: "Biometrics is the perfect way to add convenience and security to access control solutions, as you assure that it is the right person that has the right access.

"This solution is built upon the success and R&D of our mobile and payments software platforms, which verify billions of touches per day, and enables access control stakeholders to layer additional security onto existing or new infrastructure."

The platform combines with Fingerprints' biometric sensors to optimise performance for two access control scenarios: one-to-few and one-to-one authentication.

For one-to-few, biometric hardware and software are integrated into a building's access control infrastructure. A small set of biometric credentials can be enrolled onto the access control solution, enabling employees to gain access. For one-to-one, the biometric sensor and software are integrated into a plastic card or wearable, after which the device is issued to employees or residents. Users place their thumb or finger over the sensor when tapping the card to perform a multi-factor authentication.

Roig continued: "Both scenarios remove the risk of lost and stolen access cards. They also offer significantly higher security than PINs and keys - all while maintaining user convenience and privacy, which are fundamental."

To avoid fraud, during enrolment users' biometric credentials are converted into a biometric template and then encrypted on the device. If the device is stolen, fraudsters will therefore be unable to access the user's biometric information. ■



PPRO becomes direct acquirer for UnionPay

Payments platform PPRO has become a direct acquirer for UnionPay International, one of the world's largest card schemes in terms of issuance. The alliance will allow PPRO's payment service providers and merchants in Europe to accept e-commerce payments from shoppers using UnionPay as their preferred method.

Jack Ehlers, director of product, payment networks and business development at PPRO, said: "The Chinese e-commerce market is growing at a rate of 19% a year on average. This represents a huge opportunity for international merchants.

"With an average spend of \$1,934.72 a year per consumer, merchants can't afford to ignore the Chinese e-commerce market any longer. Through PPRO's new partnership with UnionPay International, it is now easier than ever for EU merchants who sell internationally to take their first step selling to Chinese consumers."

According to PPRO, the move will open up access to cross-border trade with China's B2C e-commerce market, which is valued at

Through the partnership, PPRO now supports processing and settlement for Union-Pay in 11 currencies. In addition, customers can access faster onboarding, transaction settlements and funds collection, refunds and improved conversion rates.

Wei Zhihong, market director at Union-Pay International and head of UnionPay International Europe, commented: "We're excited to open up a world of opportunity and choice of products to Chinese consumers as well as many consumers from other parts of the world.

"Through the partnership with PPRO, our customers can now shop securely and confidently with international merchants, and with a payment method they are accustomed to. We believe this will also bring more opportunities to merchants."

Earlier this year, PayPal partnered with UnionPay International to expand its network in the Chinese digital payments

The partnership aims to focus on accelerating the adoption of digital payments, and cross-border commerce in particular.



CSI PARTNERS WITH CONFERMA PAY TO OFFER VIRTUAL CARD PAYMENTS

Payments provider Corporate Spending Innovations (CSI) has partnered with Conferma Pay to increase its payments offering.

The partnership allows CSI customers to pay for travel using its virtual payment offering in areas that accept Conferma Pay.

Conferma Pay CEO Simon Barker said: "We are delighted to sign and welcome CSI into our network of payment providers. The partnership will deliver a first-class integrated payment solution, combining CSI's global reach in accounts payable with Conferma Pav's unmatched ecosystem of travel points of sale. Teaming up makes it much easier for businesses to use virtual cards across all areas of spend."

The agreement forms part of a wider trend as businesses increasingly seek virtual payment solutions from a single, preferred partner. CSI customers can now work with their partner of choice for virtual payments across accounts payable and travel spend.

The announcement comes as virtual cards become increasingly popular for businesses to pay for goods and services.

Juliann Pless, SVP of travel solutions at CSI, said: "The goal of our partnership is to bring efficiency, security and control to the



payment process for both the traveller and their organisations.

"We are excited to leverage the breadth and depth of Conferma Pay's partner base. This combined with our client-focused support and proprietary technology to help clients streamline and automate their corporate travel payment processes."

The virtual payment service for travel spending completes CSI's virtual payment offering for accounts payable. Through the service, CSI aims to replace legacy

methods and help businesses gain greater visibility and control over spend.

CSI operates as a subsidiary of intermediation platform Edenred, which connects around 50 million employees to 2 million partner merchants.

The group managed 2.5 billion specificpurpose payment transactions in 2018, primarily carried out via mobile apps and online platforms and cards, representing nearly €30bn (\$33.3bn) in business volume.

Idex Biometrics launches solution designed to reduce smartcard costs



Idex Biometrics has announced the launch of TrustedBio, a solution designed to reduce the costs of biometric smartcards.

The move comes as card cost and manufacturing complexity have stunted the mass adoption of biometric smartcards. Idex's new solution aims to reduce these costs and accelerate market adoption.

Idex Biometrics CTO Anthony Eaton said: "TrustedBio marks a major step forward for the biometric smartcard market, which was accomplished by driving integration of the entire biometric system to an advanced semiconductor process node. With this new product family, card manufacturers and integrators will be able to more easily integrate biometric systems. This will improve smartcard security and user experience."

Eaton continued: "By looking at ways to reduce costs associated with biometric systems, we've removed one of the major barriers to mass production. Smartcard providers will now be better able to prepare for future Strong Customer Authentication requirements. They will also be able to offer higher levels of security to their customers."

Idex has built on its off-chip sensor technology with new biometric-system-on-chip-based products. This new generation of products removes the need to have any electronic components laminated within the card's inlay. This is expected to lead to an improvement in manufacturing processes and yields, reducing the overall time to market.

Idex's new products and solutions will work with both current and next-generation EMV chips. As a result, customers can develop differentiated products unique to their target customers and business strategies.

The first member of the TrustedBio family featuring this biometric-system-on-chip technology will sample in the second quarter of 2020, and is scheduled to be released to mass production in the fourth quarter of

Earlier this year, the solutions provider secured a US new patent for on-card biometric enrolment solutions, which allow holders to register a template image of their finger onto a biometric card without connecting it to any other device or network. ■

UK GIFT CARD SAL

UK gift card and voucher sales grew by 1.7% on a rolling-year basis in the second half of 2019. This is despite the widely publicised challenges that are facing many consumer businesses, including shoppers delaying purchases in light of ongoing Brexit uncertainty.

The figures for UK gift card sales were released by trade body the UK Gift Card and Voucher Association (UKGCVA) and KPMG.

UKGCVA reported that leisure continues to challenge the dominance of traditional retail by increasing market share. Specifically, shoppers increasingly favour experience over product ownership.

UK gift cards sales and vouchers are again dominated by traditional retail, still accounting for 62.8% of the overall market; however, the latest data sees leisurerelated sales grow by 24% on a rolling-year basis. Moreover, leisure now accounts for 11.5% of the overall market, a gain of 2.5 percentage points when comparing the second halves of 2018 and 2019.

The business-to-business market is up by 12.7% year on year. Meantime, there is a 13.7% like-for-like increase in sales of gift cards and vouchers to consumers online.

This reflects the preferences of younger generations who prefer to shop online, and is also driven by increased consumer interest in leisure.

Open-loop options are gaining popularity, with market share growing from 3.6% last year to 5.6% this. At the same time, the market share of digital products rose by 5%, taking share from physical and paper alternatives. While convenience accounts for much of this shift, consumer demand for more environmentally friendly options is also a contributing factor.

Paul Martin, head of retail at KPMG said: "In a landscape where winning and maintaining customer loyalty is often the line between success and failure, retailers can't afford to overlook the key role gift cards and vouchers play.

"That's especially true given that growth of gift card sales remains so resilient, despite such volatile trading more broadly. Leisure is winning some more market share, but many retail players are actually recording double-digit growth of their gift card and voucher sales.

UKGCVA director general Gail Cohen added: "The challenges being faced by all consumer businesses have been painfully



clear in recent months, whether it is record low retail sales figures or the latest business casualties. However, the clear resilience of gift card and voucher sales is testament to the importance of this avenue in generating additional revenue and boosting customer loyalty."

CLINC JOINS FORCES WITH VISA TO BRING AI TO FIS

Al training platform Clinc has joined with Visa to offer its AI technology to payments and banking institutions across the world.

The deal will allow financial institutions that use Visa APIs to enable Clinc's voicefirst digital banking technology for credit card clients.

Clinc co-founder and interim co-CEO Lingjia Tang said: "Our goal has always remained the same: to create technology that makes people's lives easier.

"Partnering with a leader like Visa is a milestone for Clinc, and this API integration is going to offer small and midsize banks a similar experience that some of the largest banks in the world are using."

Clinc delivers a full suite of multilanguage conversational AI platforms, with a containment rate of 90%. Through the platforms, users can converse with their bank account in a natural and conversational way, without the need for special keywords, phrases to memorise or templated questions to learn.

Within the bank's mobile app, users can check balances, transactions and spending history using voice. They can also dispute transactions, turn cards on or off, report

and reissue lost or stolen cards, raise credit limits, or open new credit card accounts.

Tang added: "This kind of capability and cutting-edge AI wouldn't otherwise be accessible without Visa."

The AI training platform also allows customers to use voice recognition to transfer money, pay bills, create payment plans, and activate credit cards.

Since launching its first product in 2016, Clinc has developed virtual assistants and conversational AI experiences for financial institutions such as Barclays, USAA, Isbank, and OCBC Bank. ■

Splitit and Visa team to facilitate instalment payments worldwide

Buy now pay later business Splitit Payments has joined with Visa to support instalment payments for merchants globally.

Splitit will use the Visa Developer Platform to facilitate innovation in instalment payments worldwide. It will also combine with Visa Installment Solutions, which offers Visa users more control over how to pay for a purchase.

Splitit CEO Brad Paterson said: "We share a similar vision to make it easier for consumers and merchants to pay and be paid in

instalments. Partnerships like this one are a major plank in our strategy to accelerate growth, and we look forward to working closely with Visa to help our merchant partners provide an enhanced customer experience."

Splitit's suite includes an instalment payments solution for debit cards in the US and Europe. It also offers Multi-Card Payment, which enables customers to split one purchase between different credit and debit cards.



Splitit introduced a B2B credit card instalment payment solution in September 2019, and earlier this year it teamed up with digital payments firm Stripe to make it the payment facilitator for new merchant clients.

Mastercard will sponsor the 2020 and 2024 edition of the Conmebol Copa América, the premier South American soccer international competition.

Mastercard will also support women's football in the region by sponsoring the Women's Conmebol Copa América for the first time.

Mastercard is a longstanding partner of Conmebol, the South American Football Confederation, and is sponsoring the Copa América for its 13th and 14th consecutive editions.

Mastercard said that its support for the women's competition reinforces its commitment to diversity, and emphasises the importance of achieving gender equality in sports.

"At Mastercard, we believe in diversity as a key innovation factor in all areas, including sports," said Carlo Enrico. Mastercard president for Latin America and the Caribbean.

"With the expansion of our portfolio, we seek to create new connections that inspire acceptance and drive a culture of



belonging. This will lead us to reach our full potential as a society."

The Conmebol Copa América is world soccer's oldest national team championship. The sponsorship also makes Mastercard the official brand of contactless payments in South American football.

"In Latin America, our passion for football brings us closer. It is part of our identity, and it mobilises us beyond all our differences," said Roberto Ramirez Laverde, SVP of marketing and communications for Mastercard Latin America and the Caribbean

"We seek to bring Latin American fans closer to their passion, breaking down barriers and inspiring them to start something priceless." ■



hysical attacks on ATMs have been on the rise in Europe, and an emerging trend of criminals using solid explosives is an increasingly serious concern for the industry.

It is not just the loss of cash or collateral damage to property that banks need to worry about, but also the threat to lives. For this reason, ABN Amro took swift action in December 2019 when a "certain type" of cash dispenser was being targeted by criminals. The Dutch bank closed 470 ATMs - more than half its network - and said in a statement that "the escalating violence used to explode them [is] a source of serious concern, leaving its traces throughout society. Neighbours and businesses must be able to feel safe."

Mike Lee, CEO at the ATM Industry Association (ATMIA), explains that the most common way to physically attack ATMs is with explosives, which can be either gas or solid. And there is a huge difference between gas and solid explosives, adds Claire Shufflebotham, global security director at TMD Security. With gas attacks, the criminal

is limited by the cannisters they have to carry, whereas 150g of solid explosive can fit in the palm of the hand, and is enough to cause serious damage.

CRIMINALS ARE BECOMING MORE SOPHISTICATED AND **ORGANISED**

ATM BOMBING

The shockwaves are also far greater: the velocity of solid explosives is 5.3 miles per second, compared to 1.2 miles per second for gas. "It is literally a bomb. In South

Africa, they actually call it ATM bombing," Shufflebotham says.

The European Association for Secure Transactions (EAST) estimates that the average cash loss per solid explosive attack is €27,065 (\$29,839) and in one case the collateral damage was valued at around €200,000. According to EAST's November 2019 fraud update, six countries in Europe reported solid explosive attacks, with the use of Triacetone Triperoxide - a highly unstable explosive dubbed the Mother of Satan - also on the rise.

The same criminal gangs have reportedly been attacking ATMs in Europe, starting in the Netherlands and then crossing national borders into Germany, Switzerland, Italy and elsewhere.

However, Lee points out that the emerging trends do not just originate in Europe. "New methods of attack can start anywhere, not just Europe," he says. "Criminals are becoming more sophisticated and organised, and they share information, methods and software on the dark web."

In fact, as Shufflebotham notes, the explosive attacks on ATMs actually started in Latin America and South Africa, with the local mining industries giving criminals easy access to explosives.

INDUSTRY IN DENIAL

The response in the industry has been somewhat reactionary, notes Shufflebotham, and observers have been in denial about types of potential attacks.

"In the UK there were gas attacks and no one thought solid explosive attacks would happen, but now there is at least one a month in the UK," Shufflebotham explains. "What they said would never happen has started to happen."

A typical response to physical attacks has been to increase physical security on ATMs, which has precipitated a dangerous cycle of adding defences - resulting in more explosives being used. One way to break this cycle is to make the cash worthless, thus removing the incentive for the attack altogether.

"Ink staining invalidates the cash in the machines," says Bernd Redecker, director, product and solution security at Diebold Nixdorf. However, he notes, there is a question of legislation and whether stained money is legal tender; in some countries it is, in others it is not.

Shufflebotham adds that more industry collaboration is needed, saying: "Everybody needs to be aware that a stained note is a stolen note, not something that has fallen into an ink pot."

Ink staining has proved to be an effective deterrent in South Africa, and has dramatically reduced the number of explosive attacks. Dutch banks are also looking at a number of methods to invalidate cash, and in a statement said: "Once a suitable method has been found, it will be installed in cashpoints as soon as possible."

Given that cash use is declining and the physical risks to ATMs are rising, is it still worthwhile for retail banks to provide ATMs?

DUTCH BANKS JOIN FORCES

As Lee points out, in an environment where bank branches are closing, "the ATM becomes even more important as the most popular financial services touchpoint, providing access to cash a wide range of value-added services, so it always remains worthwhile to keep

In the Netherlands, three major banks - ABN Amro, ING and Rabobank have joined forces to form Geldmaat, an

organisation that operates ATMs and makes sure the distribution of machines is more efficient, even in times of declining cash use.

Bob Meara, senior banking analyst at Celent, says the Netherlands is the most digitally driven economy in the Western world, and has the lowest cash utilisation as well as the highest rates of internet banking. "If ATMs go away in any kind of large measure, it is likely to start in somewhere like the Netherlands."

The situation is similar in Sweden, which, according to a September 2019 report by Kearney, is predicted to be completely cashless in five years. Major banks such as SEB have also opted to not operate their own ATMs, and have formed Bankomat, which is jointly owned by the larger banks.

Meara adds that even though cash use is declining, its presence is still persistent, and the highest use tends to be among the underbanked or lower-income segments. In some markets, "regulators and governments are wary to disadvantage those constituents," says Meara.

CASH BECOMES POLITICAL

This is evident in the UK, for example, where cash has become a political issue in the form of the Access to Cash review.

In May 2019, the UK government announced that the future of cash would be protected. Natalie Ceeney, chair of the review, said at the time: "Cash use is falling rapidly, but digital payments don't yet work for everyone.

Mott predicts in the future that there will be fewer ATMs, but the aim is for them to cover the same areas in a thinner, vet still extensive ATM network. "There will still be ATMs in the right places; there will still be access to cash," he says.

FEW AND FAR BETWEEN?

When asked whether it is still a worthwhile exercise to operate any ATMs at all, Meara comments: "I think so, although the strategic rationale might be challenged in the near

He adds that for ATMs that are physically tied to branches, "their role may change materially, but they will stick around for as long as we have branches." In contrast, Meara expects standalone ATMs to become "fewer and far between".

In this more challenging environment, and faced with increasing physical security risks, there are still actions that retail banks can take to protect themselves from losses.

Redecker notes: "It is good to take a riskbased approach – there are countermeasures you can add to the security of the machine. It is a good idea to assess the risk you are running on a regular basis."

If retail banks do that, he adds, they could take the decision not to do something right now, but in a few months' time the risk position could change and they adapt accordingly.

Also, he says: "The industry should not only consider solutions for a single point, security has to be considered holistically - you

DEPLOYERS AND SERVICE PROVIDERS HAVE GOT TO LOOK AT THE ALTERNATIVES. AND NOT WAIT UNTIL AN ATM ON THEIR ESTATE HAS BEEN HIT

"We need to safeguard the use of cash for those who need it, and at the same time work hard to ensure that everyone can participate in the digital economy. If we sleepwalk into a cashless society, millions of people will be left behind."

In the UK, unlike the Netherlands, the major banks are keen to own and operate their ATMs, says Graham Mott, director of strategy at Link, the network that connects ATMs in the UK. If the machine is owned by the bank and is being used by the banks' own customers, he points out, it can be used for more individual services.

have to look at the process as well."

Shufflebotham's advice for retail banks is similar, and says that ATM providers need to understand what countermeasures are at their disposal. "Deployers and service providers have got to look at the alternatives, and not wait until an ATM on their estate has been hit," she adds.

"All deployers should be aware of the risks and have lab-proven countermeasures they can deploy if there is any risk on their network. Once they get hit it is too late. They need to be ready, and not put their head in the sand," Shufflebotham concludes.

STAYING ONE STEP AHEAD IN THE BUSINESS OF CREDIT CARDS

A steady stream of changes with far-reaching implications has overrun the credit card market, raising serious questions about the viability of old business models. Mohamed Dabo takes stock of the key developments, and asks how issuers can step up their game in this brave new world

redit cards are still a highly profitable business, even though many issuers have relied too much on rewards to attract and retain customers.

The future, however, looks less bright as a multitude of challenges loom over the credit card business. These include the growth of digital payments, changing consumer behaviours, the threat from bigtechs and non-traditional players, and the rise of faster payments.

It is likely that changing consumer behaviour, competition from debit cards and bank transfers, and security concerns will intensify in the coming years. A good appreciation of these challenges is the first step towards reviving the relevance of the credit card business.

Preference for debit cards

A recent survey by the Deloitte Centre for Financial Services finds that millennial and Gen Z consumers may pose the biggest challenges to the credit card market. Younger consumers typically prefer debit cards over credit cards, especially when choosing a default payment method for digital payments.

The survey shows that 52% of Gen Z and 41% of millennials prefer to use debit cards most. Furthermore, younger consumers overall are also taking on less credit card debt compared with their predecessors.

Consumer addiction to generous rewards

Consumers have now become accustomed to generous rewards. Deloitte finds that nearly three-quarters of consumers surveyed say rewards, discounts and other offers are the most important reason for using credit cards.

In addition, one-quarter of consumers surveyed are willing to switch credit card provider over the next two years to obtain better rewards elsewhere. Again, younger consumers – 34% of Gen Z and millennials – are even more likely to switch.

Declining credit card spending

Consumer behaviour has also changed regarding credit. According to The Nilson Report, outstanding credit as a proportion of total credit card spending has been steadily declining over the past 15 years.

Clearly, if consumers use credit less and less, it will negatively impact the interest income component of credit card revenues.

Alternatives to credit card financing

Additionally, new alternative options to credit card financing are emerging.

POS financing solutions allow retailers to offer fixed-term instalment loans to consumers to finance purchases at the physical POS or at digital checkouts. In addition, buy now pay later options, which often include interest-free periods, are aimed at customers choosing POS loans over credit cards.

Account-to-account-based faster payments are another trend that poses a risk to credit cards' relevance. Faster payments solutions could eventually displace credit cards from the act of paying, which would result in credit card issuers losing interchange fees.

Preference for debit cards

Of course, debit cards are the closest alternative to credit cards. In the Deloitte survey, nearly two-thirds of consumers say they would likely switch to debit cards if they were offered the types of reward that credit

Again, younger consumers seem more likely to prefer debit cards for digital payments. For instance, 42% of millennials who use Apple Pay in the Deloitte survey use debit cards, compared with only 23% of Gen X.

How issuers can elevate their game

Authors of the Deloitte survey identified key areas where credit card issuers can act to take their business to the next level.

The first is to revisit the credit card value proposition. Issuers should view the challenges as a chance to redesign the credit card value proposition and their role in consumers' lives for the digital era.

Consumers are also looking for flexibility in choosing their product features: 69% of surveyed respondents said they would find a credit card that offered personalised features appealing.

Among other things, card issuers should account for generational preferences when they design their rewards programmes. In addition, card companies must get the basic customer experience right. Sometimes the most basic elements can create lasting impressions.

Customers in different age demographics consider same-day resolution of issues and complaints as an important service from their credit card provider. As a result, card companies should aim to reduce response times in line with increasingly discerning customer expectations. Card companies must also excite customers with instant gratification.

Established issuers, are keeping pace with some of these expectations. These include, for example, by issuing contactless credit cards. However, non-traditional players are gaining first-mover advantage with others, such as daily crediting of reward points.

Integration, security and strength

Consumers are increasingly looking for quick and hassle-free shopping experiences. Nearly half of respondents rank ease of use among their three most important attributes when thinking about paying in the future.

Security is also a major factor in ensuring card issuers continue to remain relevant. Through data use, analytics and data insights, card companies can create a service that is efficient and convenient.

Finally, organisations should keep up with constantly evolving customer demands by redesigning and delivering new products.

CANADIAN POS: E-COMMERCE SOFTWARE **VENDORS EXPAND INTO** PAYMENTS FACILITATION

Canada is home to three fast-growing POS and e-commerce technology vendors with global ambitions: Shopify, Lightspeed POS and TouchBistro. They each offer all-inone POS solutions including integrated payments processing, providing merchants with a single platform to manage their business, Robin Arnfield reports

lthough Shopify, Lightspeed, and TouchBistro initially partnered with third-party processors on a customer referral model, they realised that becoming payment facilitators, which manage the relationship with the merchant, provides a better customer experience and a greater source of revenues.

A payment facilitator (payfac) establishes its own merchant bank account with an acquirer and receives a merchant ID to acquire and aggregate payments for a group of smaller merchants, known as sub-merchants. These smaller merchants no longer need to get their own merchant ID and, instead, are onboarded under the payfac's master MID.

The downside is that payfacs are liable for financial losses arising from processing risks and fraud for the sub-merchants they process on behalf of. The benefit is that payfacs can provide merchant services offerings that are tightly integrated with some other solution that they sell, without the lengthy underwriting process traditionally required to provide merchant accounts to businesses.

SHOPIFY

Both Shopify and Lightspeed are publicly quoted companies, Shopify's IPO having taken place on the New York Stock Exchange in 2015, and Lightspeed's IPO occurring on the Toronto Stock Exchange in 2019.

Shopify's share price reached record heights in early 2020, as it reported growth in providing its e-commerce platform to larger online merchants, having originally targeted SMEs. However, although still Canada's top

tech stock, Shopify's share price has dropped

Shopify offers a range of services and software to enable merchants to operate e-commerce businesses, including order management, inventory and fulfilment, payments, warehousing facilities, shipping, analytics, merchant cash advances, and physical POS hardware.

NOW IN 15 COUNTRIES

In a challenge to Amazon, Shopify is rolling out a network of fulfilment centres to help US merchants lower shipping costs and ensure timely deliveries. The Shopify Payments service is a fully integrated payments processing platform for online and offline card acceptance and is available in 15 countries including the US, Canada, UK, Australia, Japan, Germany and Spain.

Merchants who use Shopify Payments are eligible for cash advances from Shopify Capital. Currently, two-thirds of Shopify's merchants in these 15 countries are using Shopify Payments. As of December 31, 2019, one million merchants from 175 countries used Shopify's software solutions, with the US accounting for 52% of merchants, followed by the UK with 7%, and Canada and Australia both with 6%.

Shopify's revenues are split between subscription solutions and merchant solutions revenues, with payments processing fees accounting for the majority of its merchant solutions revenues. If merchants do not use Shopify Payments, Shopify charges a transaction fee based on a percentage of gross

merchant volume (GMV).

According to eMarketer, in October 2019 Amazon had 37.3% of US retail e-commerce sales, followed by Shopify with 5.9%, eBay with 5.7% and Walmart with 4.7%.

Shopify's market share is based on its 2019 US gross merchant volume, excluding merchant sales made through POS. It defines GMV as the total dollar value of orders processed on the Shopify platform in the period, net of refunds, and inclusive of shipping and handling, duty and value-added

In the year to 31 December 2019, Shopify saw its total revenues rise by 27% year on year to \$1.578bn, while fourth-quarter 2019 revenues rose by 47% year on year to \$505.2m.

In the fourth quarter of 2019, GMV rose by 47% year on year to \$20.6bn, while gross payments volume – the amount of GMV processed through Shopify Payments - grew by 41% to \$8.9bn, accounting for 43% of GMV processed in the quarter.

For 2019 as a whole, GMV totalled \$61.1bn, while gross payments volume grew to \$25.7bn, accounting for 42% of GMV processed in the year.

Shopify Capital issued \$115.9m in merchant cash advances and loans in the fourth quarter of 2019, taking its cumulative cash advances to \$885m since the launch of Shopify Capital in April 2016. Originally, Shopify only provided merchant cash advances to established online retailers, and required them to have a credit or payments history or collateral.

MICRO-LOANS

In January 2020, it began offering microloans starting at \$200 to start-up e-commerce businesses which agree to use the Shopify Payments service. In October 2019, instalment payment provider Splitit signed an agreement with Shopify to make the Splitit Buy Now Pay Later (BNPL) service available to Shopify's global network of merchants.

Splitit's BNPL technology has been integrated with Shopify's platform and is listed directly inside Shopify as an integrated payment gateway, which Shopify's merchants can add to their websites to offer their customers a BNPL payment option linked to their existing credit cards.

50 restaurants a day," says Barrotti. "We sign up 500-700 new venues every month worldwide."

RESERVATIONS

TouchBistro has offices in the US, Canada, Mexico, and the UK, and sells into 100 countries. Its technology includes table-side and over-the-counter order taking, payment processing, menu management, sales tracking and reporting, and staff scheduling.

In October 2019, TouchBistro launched TouchBistro Reservations, a reservation and guest management platform for restaurants, which is integrated with TouchBistro POS and provides restaurants with insights about their customers such as spend and dining

and debit card transactions.

Barclaycard's payment solution is integrated with TouchBistro, which means TouchBistrobased UK restaurant POS devices can automatically calculate the amount of a bill, including split amounts between diners and gratuities, and then process the payment.

In Mexico, TouchBistro's processing partner is EVO Payments, and in other markets TouchBistro partners with Square and Worldpay.

According to Canada's The Globe and Mail newspaper, TouchBistro's payments processing revenue-sharing deals with JP Morgan in the US, Barclaycard in the UK and Mexico's Evo Payments now account for 21% of recurring revenue.

"When we originally launched our company, we would refer customers to one of our payments processor partners such as Moneris in Canada and Chase in the US," says Barrotti. "The customer's payment device would come from one of our processing partners. This model served us well for many years, but the downside was that, when onboarding a client, we would hand them over to the payments processor, and they would go into a black hole until we found out if they were approved for payment processing or not."

Although TouchBistro still does some referrals to payments processors, it has moved to a payments facilitator model where it owns the processing relationship with the client and passes the transactions through to the underlying processor, Chase in the US and Barclaycard in the UK. In Canada, TouchBistro has a payments referral model, not a payfac relationship, with Moneris.

However, unlike a typical payments facilitator which takes the payment risk, reports the top-line merchant processing revenue on its profit and loss account, and pays a fee to the underlying processor, TouchBistro lets the processor take the risk.

"We just report our share of the processing fee," says Barrotti. "Instead of reporting income on 140 basis points - the amount the merchant pays including interchange and credit card processing fees - paying out funds to all the parties, and owning the risk, we just report our commission of 50 basis points, and don't take the risk. When we enter a new market, we talk to all the banks to negotiate the best partnership. Then we launch with a preferred partner in that market."

Barrotti says that TouchBistro is winning new venues from its existing restaurant clients as well as entirely new customers. "I would

WHEN ONBOARDING A CLIENT, WE WOULD HAND THEM OVER TO THE PAYMENTS PROCESSOR, AND THEY WOULD GO INTO A BLACK HOLE

In February 2020, Shopify joined the Libra Association, the governing body for Facebook's controversial Libra cryptocurrency. Shopify's support for Libra follows eight high-profile defections from the association since October, including cancellations of membership by Mastercard, PayPal, Stripe and Visa. The defections followed strong criticism of Libra from central banks and financial regulators.

Shopify said in a statement that it will work with the Libra Association "collectively to build a payment network that makes money easier to access and supports merchants and consumers everywhere".

TOUCHBISTRO

In September 2019, privately held restaurant POS system vendor TouchBistro raised C\$158m (\$112m) in Series E funding from investors such as Canada's OMERS Growth Equity, Barclays, RBC Ventures, BMO Capital Partners, and JPMorgan Chase.

"If we maintain our current growth trajectory, which is seeing us sign up 30-50 restaurants a day, a 2021 IPO is certainly a possibility," Alex Barrotti, TouchBistro's CEO and founder, tells CI.

As of February 2020, TouchBistro's iPadbased POS technology had been rolled out to 25,000 restaurants and pubs globally. "In 2011, we would sign up 30 new restaurants a month, and today we are winning 30history and drink preferences. Restaurants that subscribe to TouchBistro Reservations can accept reservations online through their own website, Google Search and Maps, or via the TB Dine website or mobile app.

Since TouchBistro Reservations includes CRM technology, TouchBistro is now looking at developing a customer loyalty module. "We're now on both sides of the equation, as we own the POS software and the reservation component," says Barrotti. "In the past, the two weren't integrated in our platform. We would know you had been to a specific restaurant a number of times, but wouldn't know what you had bought. Now we know what you ordered, so the next time you come in, we can make you an offer."

TOUCHBISTRO PAYMENTS

In 2018, TouchBistro launched TouchBistro Payments powered by Chase to provide integrated payment processing for restaurants in the US. TouchBistro Payments offers instant payment processing and an integrated mobile payment device that allows customers to pay at the table using contactless, chip, and magnetic-stripe cards plus Apple Pay, Google Pay, and Samsung Pay.

In Canada, TouchBistro's payments processing partner is Moneris, a joint venture between RBC and BMO Bank of Montreal. Its UK processing partner is Barclaycard, which processes nearly half of the UK's credit

say that 50% of our new restaurants each month are owned by existing clients, and the remainder are entirely new customers," he says. "But 80% of our new restaurant clients who don't have an existing relationship with us, opt for our payments facilitation contract, which is very good for us."

TouchBistro could become a processor in its own right, Barrotti says. "But we would need considerably more people to deal with our clients, and would have to manage the risk," he says.

LIGHTSPEED POS

Lightspeed serves over 74,000 SME locations worldwide and processes approximately \$20bn in gross transaction volumes (GTV) for its customers. Its cloud-based POS software caters for bricks-and-mortar retailers and restaurants as well as online merchants. The software offers a range of tools to help SMEs manage their business, including financial reporting, cash flow tracking, analytics, and loyalty.

According to Lightspeed, US retailers using the Lightspeed platform saw 13.8% growth year on year gross in GTV in January to October 2019. In contrast, industry average retail GTV during this period grew 3% year on year, according to the US Census Bureau's Advance Monthly Retail Survey.

In January 2019, Lightspeed launched its Lightspeed Payments platform in the US for physical and online retailers, and has just announced the initial availability of Lightspeed Payments for US hospitality merchants. Lightspeed spokesperson Bradley Grill says that Lightspeed will roll out Lightspeed Payments to Canadian retailers during 2020.

"Canadian retailers represented nearly 10% of Lightspeed's GTV in the last 12 months, and are poised to embrace Lightspeed Payments in a meaningful way," Lightspeed CEO Dax Dasilva said in an investor presentation in February 2020.

In its third quarter ending 31 December 2019, 50% of Lightspeed's new US retail customers signed up for Lightspeed Payments along with the company's other software.

Eliminating the need for a separate payment processing provider, Lightspeed Payments directly integrates with the Lightspeed POS platform. Operating from one system of record, merchants can use the suite of modules comprising the Lightspeed platform to operate from a single back end.

"For Lightspeed Payments we act as the payment facilitator, and the customer only deals with us for their payments," says Grill. "We have a number of processing partners for our Lightspeed Payments solution, including Worldpay and Stripe. Outside North America, we work with partners who provide processing for our customers, who have to arrange a direct relationship with one of these third-party processors.

"Merchants are taking advantage of cloud technology to increasingly streamline operations and generate a tangible return on investment," Dasilva said in a news release. "Lightspeed Payments provides customers with the simplicity they desire to optimise their time and grow their business."

In a statement, Lightspeed said that Lightspeed Payments offers transparent pricing and cost certainty, as there are no start-up fees and standard rates are charged for card-present transactions, card-not-present payments, and keyed-in transactions.

In its third quarter ending 31 December 2019, Lightspeed's software and payments revenue rose by 58% year on year to \$28.4m, representing just under 90% of total revenue. Stripe Terminal, which allows for in-person payments at the point of sale.

According to Lightspeed, a key benefit of integrating with Stripe is being able to offer retailers and restaurants a mobile checkout capability, as well as card acceptance at countertop POS terminals.

Stripe and Lightspeed said that the integration of Stripe Terminal will make it easier for restaurants and retailers to start accepting in-store payments and customise card readers with their own unique branding, as well as reduce latency at the checkout.

Stripe Connect enables rapid onboarding for e-businesses wanting to accept payments with Lightspeed, automates payouts, and keeps Lightspeed out of the flow of funds, reducing the operational and regulatory burden of managing money movement.

"Stripe Connect is a solution for platforms to facilitate payments for merchants," Stripe spokesperson Lewis Clark tells CI. 'Rather than becoming a payfac themselves, platforms and marketplaces integrate Stripe Connect to stay outside the flow of funds while still

44 MERCHANTS ARE TAKING ADVANTAGE OF CLOUD TECHNOLOGY TO INCREASINGLY STREAMLINE OPERATIONS AND GENERATE A TANGIBLE RETURN

"Overall for the month of December 2019, we had our most successful month yet in terms of customers signing up for Lightspeed Payments," Dasilva said in a February 2020 investor presentation. "Furthermore, for the first time since Lightspeed Payments went live, monthly payments sign-ups from our existing base exceeded what we signed up from net new customers. We've learned a lot during the past 12 months about our ability to forecast, sell, support and grow the payments business. Drawing upon this experience, we've never been more confident that payments will be an important long-term growth driver for Lightspeed."

PARTNERSHIP WITH STRIPE

In February 2020, Lightspeed announced a partnership with Stripe to enable Lightspeed Payments to offer North American merchants extra processing options. The two companies have integrated several of Stripe's payment software offerings into Lightspeed Payments, including Stripe Connect, a product for marketplaces and online platforms, and

providing customized experiences to submerchants for accepting payments. Stripe has direct integrations to the card networks in Europe and Asia-Pacific. In the US, we currently work with First Data as our card acquiring processor."

In January 2020, Lightspeed bought German hospitality POS software vendor Gastrofix in order to expand in Europe, following its October 2019 acquisition of Australian POS software firm Kounta and its July 2019 purchase of Swiss hospitality POS software vendor Ikentoo.

Cash is still the dominant payment method in Germany, accounting for 67% of the 50bn consumer-to-business transactions a year, but electronic payments are growing in the country, according to a September 2019 report by McKinsey & Co.

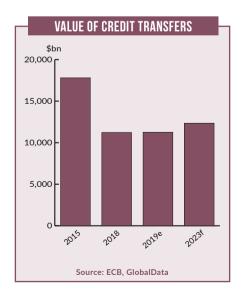
According to Dasilva, Lightspeed wants to benefit from the significant growth in electronic payments in Germany and consequent demand for POS solutions. "We see us being part of that [electronic payments] trend," Dasilva told The Globe and Mail.

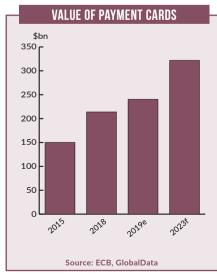


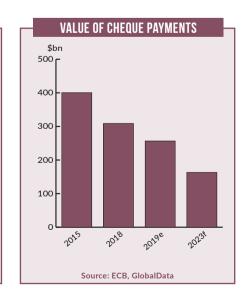
ash remains the preferred method of payment among Spanish consumers, accounting for 63.2% of the total payment transaction volume

in 2019. However, with government initiatives, concerted efforts by banks, rises in consumer awareness and confidence in digital payments, and wider improvements

to the payment infrastructure, Spanish consumers are gradually shifting towards greater adoption and acceptance of electronic payments.







The growing acceptance of payment cards by retailers, which is stimulating consumer uptake, and the advent of contactless technology are anticipated to reduce the share of cash in the economy in the period to 2023.

To accelerate the use of electronic payments, banks are increasingly turning to low-cost channels such as online and mobile to offer products and services. The adoption of electronic payments is anticipated to rise further over the next five years with the proliferation of digital-only banks, the introduction of new payment technologies, and growth of e-commerce payments in Spain.

DEBIT CARDS PREFERRED

Despite low levels of penetration, debit cards remain the most used card type in Spain, with debit card payments accounting for 65% of the total card payment value in 2019. This reflects the generally debt-averse nature of Spanish consumers.

The frequency of debit card payments is rising progressively, up from 68.2 times a year in 2015 to 136.5 in 2019, at a CAGR of 18.9%. Increased debit card use is supported by the availability of customised debit cards and value-added services, and rising acceptance of contactless debit card payments at retail outlets.

CONTACTLESS TECHNOLOGY

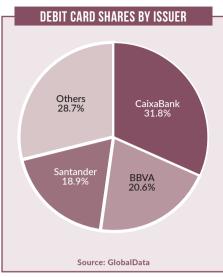
Spain has embraced contactless technology, with leading banks including CaixaBank, Santander and BBVA offering contactless cards.

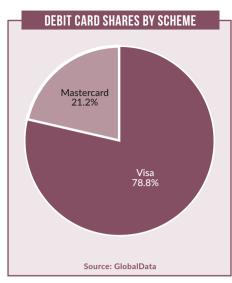
The growing popularity of contactless has encouraged retailers to install POS terminals with contactless functionality. Growing adoption of the technology on public transport will further encourage contactless card use.

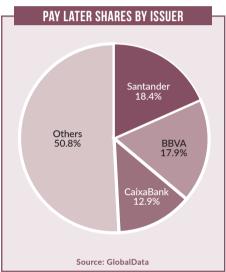
The Municipal Transport Company of Madrid (Empresa Municipal de Transportes de Madrid - EMT) extended contactless payments to all its 2,075 buses in November 2019, allowing commuters with an American Express, Mastercard or Visa contactless card to make contactless payments for fares.

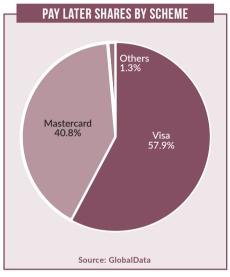
RISING E-COMMERCE

The e-commerce market in Spain has grown strongly, rising from €20.7bn (\$23.8bn) in 2015 to \$49.7bn in 2019 at a CAGR of 20.2%.









Ongoing improvements in technology and rising smartphone penetration have resulted in significant growth of online transactions in Spain.

To aid e-commerce, all major banks are offering virtual cards specifically for online transactions. In addition to traditional payments. alternative solutions such as PayPal, Apple Pay, Google Pay and paysafecard are used extensively for the purpose of online shopping.

Ongoing developments in the logistics industry will further support e-commerce market growth. In March 2019, Correos, Spain's national postal service. partnered with AliExpress and Cainiao Smart Logistics Network, a logistics operator owned by Alibaba, to speed up package distribution between Spain and China. The partnership also aims to support Spanish SMEs in expanding sales to overseas markets.

INFRASTRUCTURE

The number of POS terminals increased from 1.6 million in 2015 to 1.9 million in

> 2019. With the increased number of POS terminal installations at retail outlets, the country's potential for card-based payments also grew. In addition to conventional POS terminals, mPOS

terminals are also being introduced in Spain. In March 2018, LG Spain partnered with Verifone to

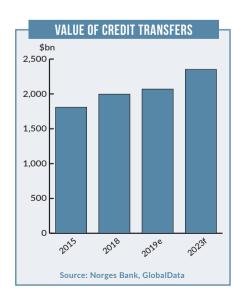
introduce the LG Biz & Go mPOS solution for SMEs. The solution comprises a mobile app integrated with an LG smartphone and an mPOS e265 Verifone terminal, enabling merchants to accept card payments and manage stock, billing and collection. ■

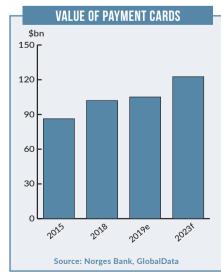


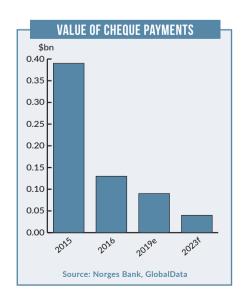
ayment cards reign supreme in Norway, with few individuals using cash on a daily basis, and most possessing a minimum of three payment

cards. This is the result of a robust economy, an efficient domestic debit card scheme in BankAxept, and a high banked population (99.7%).

Ready access to formal financial services has resulted in a population that is highly comfortable with payment cards, both in store and online. At the core of the







payment market is consumers' embrace of debit cards and BankAxept. Electronic payments have also gained ground due to substantial government investments in building long-term infrastructure for cashless transactions.

Contactless card numbers and use have seen healthy growth in the past few years, with the vast majority of contactless users seeing these cards as helpful. Affordable and widely available financial products, the growing presence of digital-only banks, consumer preference for e-payments, a competitive marketplace, and a transparent business environment will aid the move towards cashless.

BANKAXEPT DOMINATES

The frequency of debit card payments in Norway stood at 318.7 in 2019 - one of the highest in the world. The high use is mainly a result of growing consumer preference for cashless payments.

High fees for ATM withdrawals have also pushed debit card use for payments. Growing use at POS terminals has been supported by BankAxept's zero interchange fee model, which enables lowcost merchant acceptance.

To drive debit card use, BankAxept offers contactless debit cards enabling card holders to make contactless payments of up to NOK400 (\$46.22) without needing to enter a PIN.

CREDIT AND CHARGE CARDS

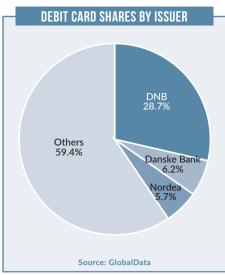
Although penetration of credit and charge cards is high, use remains stubbornly low. These cards accounted for just 21.5% of the total card payment transaction value in 2019.

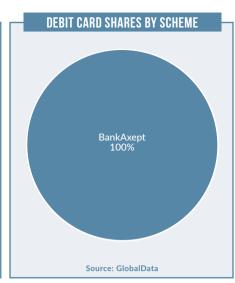
However, as the debit card market gradually heads towards saturation, credit and charge cards are proving increasingly lucrative for banks. Credit and charge cards registered strong growth in the period 2015-2019 in terms of card payment volume and value, supported by a growing e-commerce market and increased overseas spending.

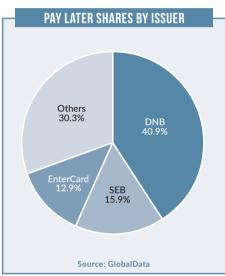
As highlighted by the 2019 Banking and Payments Survey, credit and charge cards accounted for 35% of total e-commerce transactions by value in 2019.

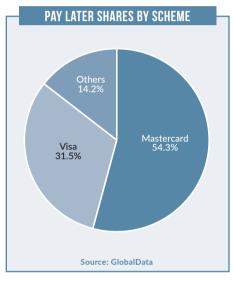
E-COMMERCE GROWTH

E-commerce in Norway rose during the review period 2015-2019 from \$11.7bn in 2015 to \$21.1bn in 2019 at a CAGR









of 15.9%. Norway registered the highest average spending per capita of \$3,925 in 2019 among all Nordic countries. Growth was supported by high internet and smartphone penetration, as well as online events such as Black Friday and Cyber Monday, with significant discounts to encourage consumers to make purchases.

The availability of alternative payment solutions including PayPal, Vipps, Masterpass, Klarna and Apple Pay will also support growth going forward.

BANKAXEPT POPULARITY

The number of prepaid cards in circulation recorded a CAGR of -34.2% during the four-year period to 2019.

According to Finance Norway, prepaid cards are not very successful in the country. This is mainly due to the popularity of BankAxept debit cards, which are offered free of charge. The high banked population and the fact that each individual owns an average of more than

one BankAxept debit card has limited the scope for prepaid card growth.

INFRASTRUCTURE

The number of POS terminals grew from 152,757 in 2015 to 162,889 in 2019 at a CAGR of 1.6%. This growth was mainly supported by greater POS adoption among smaller merchants. Lower acceptance costs for domestic cards and reduced interchange fees on international schemes have also supported growth.

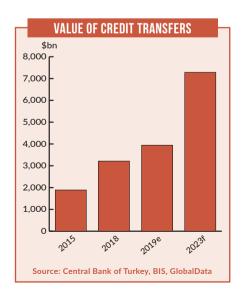
The growing payment card market has attracted new entrants to the Norwegian mobile POS space. SumUp offers its SumUp 3G card reader in European markets including Norway. The solution enables merchants to accept all types of payments, including contactless, chip and PIN, Google Pay and Apple Pay. The solution works via a built-in SIM card that connects to the 3G network, eliminating data costs and the need for a Wi-Fi connection or smartphone.

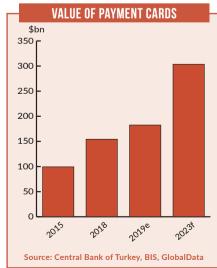


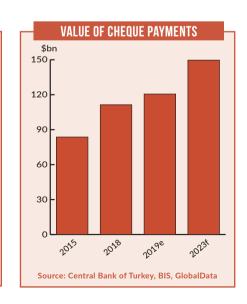
urkey's payment card market remains highly competitive and attractive. Turkey has the highest card penetration among its peers, with

Turkish citizens holding an average of nearly three cards.

This high penetration has been supported by rising banked and young populations, well-developed payment infrastructure, and the government's vision of a cashless society by 2023. Consumers are increasingly embracing payment cards







for day-to-day transactions: the number of card payments rose from 3.8 billion in 2015 to 6.5 billion in 2019 at a robust CAGR of 14%.

Growth in the payment card market in recent years has been characterised by the rise of contactless payments and the emergence of digital wallets; however, digital wallets still need to demonstrate greater benefits and convenience compared to payment cards.

The transition towards electronic payments is expected to continue over the period to 2023, with ongoing modernisation of the country's payment infrastructure, the introduction of new alternative payment technologies, and e-commerce payment growth.

GOVERNMENT MEASURES

Debit card penetration is high in Turkey, with every Turkish resident holding nearly two cards. This is supported by a rising banked population, which grew from 66.9% in 2015 to 70% in 2019.

Instant card issuance has become widespread, with VakifBank and Halkbank offering this facility to their customers.

Despite high penetration, debit card use is mostly confined to ATM cash withdrawals rather than payments. However, with banks offering discounts and reward points on debit cards. Turkish individuals are gradually migrating from low-value cash payments to cards.

CREDIT CARD USE

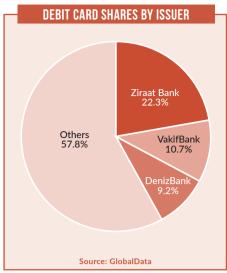
Credit card penetration in Turkey stands at 84.6 cards per 100 individuals, which is the highest among its peers. Turkish consumers are also prolific users of credit cards, with frequency of use for payments standing at 61.2 times per card per year - the third-highest among its peers after Poland and Russia.

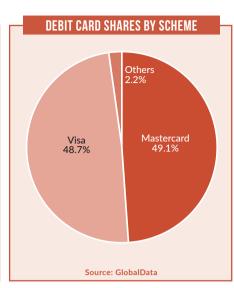
Credit card use for payments will be further accelerated by revised credit card regulations introduced in June 2019, according to which the number of monthly instalments on certain products was raised. Meanwhile, monthly minimum payments were reduced based on card limits.

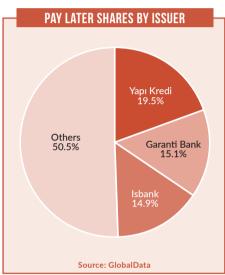
CONTACTLESS ADOPTION

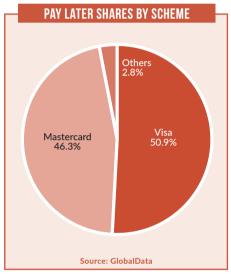
Turkey was an early adopter of contactless technology in Europe, first issuing contactless cards in 2006.

Turkey has registered continuous growth in contactless card holding among









consumers, with the number of contactless payment cards rising from 23 million in 2015 to 73 million in 2019 at a strong CAGR of 33.5%. This figure is anticipated to rise further to 130.4 million by 2023. To encourage contactless payments, the Interbank Card Center increased the cap on contactless payments from TRY90 (\$17.02) to \$22.69 effective from August 1, 2019.

INTERNET PENETRATION

E-commerce in Turkey rose from \$4.70bn in 2015 to \$14.80bn in 2019, a CAGR of 33.2%; this figure is set to reach TRY157.3bn in 2023. High online and smartphone penetration and increasing consumer confidence in online transactions drove the growth.

This has attracted international companies to the market. In August 2018, Alibaba acquired a majority stake in Turkish e-commerce company Trendyol at an enterprise value of \$750m. Following Alibaba's entry into the Turkish e-commerce market, Amazon launched operations in September 2018, offering products in a variety of categories.

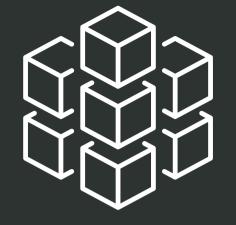
PAYMENT INFRASTRUCTURE

To increase electronic card acceptance, all major banks offer POS and mobile POS solutions. For example, VakifBank offers a range of card payment acceptance solutions, including fixed, mobile and contactless POS.

In addition to conventional POS terminals, banks are also offering virtual POS terminals that enable merchants to accept card payments for online transactions.

Garanti Bank offers the Garanti Virtual POS, which helps merchants accept Visa, Mastercard, American Express and Diners Club credit cards for e-commerce purchases. Similarly, Ziraat Bank offers a virtual POS that supports all debit and credit cards. ■

REASONS NOT TO BE FEARFUL: DEMYSTIFYING DIGITAL CURRENCIES



The topic of digital currencies tends to attract extreme responses on all sides. Their greatest advocates insist that they are the way of the future, and the essential foundation of a new, more democratic financial system. On the other hand, critics condemn them as volatile, untrustworthy and unsound as either an investment or means of exchange. Stephen Stonberg, COO and CFO at Bittrex Global, writes

The criticisms of digital currencies are grounded in some real consumer sentiment.

A global survey by Kaspersky last year found that 31% of consumers across 22 countries believe digital currencies are volatile and would need to be more stable before they consider using them. A small minority, 19%, had experienced hacking attacks while using them.

On one level, people are unwilling to trust digital currencies because they are not accustomed to them. Like every significant evolution in the history of payments, a new medium of currency tends not to seem as substantial or real as its predecessor. Added to that, an entirely digital asset means there will always be fears over fraud and cyberattacks.

Cryptocurrency has also created its own reputational problems through initial opposition to traditional financial systems, something that is now starting to be reversed.

In other words, consumers could be forgiven for lacking trust in digital currencies. But those fears are not necessarily justified, and they can be dispelled by understanding both some of the fundamentals of cryptocurrency and some important changes that are shaping the next phase of its evolution. Here are three points for any sceptic to bear in mind:

1. Blockchain creates trust

The irony about a lack of trust in digital currencies is that the technology they rely upon was specifically designed to create a system of trust.

Blockchains, the digital ledgers that record the creation and transaction of cryptocurrencies, create a transparent, timestamped record of ownership - created with such significant and widely distributed computing power that they are essentially impossible to tamper with.

There is no central repository of data that can be targeted in a cyberattack, and it is this decentralised model – as opposed to the predominant role that institutions play in managing fiat currencies - that appeals to most advocates of digital currency.

Blockchains create an unprecedented level of transparency around financial ownership and transactions. Rather than undermining trust, over the long term they will facilitate it.

2. Regulation is increasing

While cryptocurrency made its name as a virtual Wild West, the market has shifted significantly in the last few years. More capital has flowed in, and regulators have begun to take an interest. Notably, Liechtenstein has created a first-of-its-kind regulatory framework that allows for the tokenisation of any asset: allowing the underlying asset to be held and traded digitally.

The government of Bermuda, for example, has announced that residents can now pay their taxes and other fees in cryptocurrency, and will provide support for other "decentralised finance protocols". Both are indicators that digital currencies will be increasingly governed by regulation in the near future. For consumers that is an important development - signifying the evolution of a mature and trustworthy asset class where market participants are required to play by the rules.

3. The market is becoming institutional

In parallel with growing regulation has been the increasing prevalence of institutional investors in the market. Cryptocurrency asset manager Grayscale saw capital inflows of over \$600m in 2019, more than in the previous five years combined, with 71% of that from institutional investors.

In addition, according to a survey by Fidelity, 47% of institutional investors think digital assets have a place in their portfolio. Greater institutional investment is both a recognition of growing trust in digital currencies and an enabler of further growth and evolution. As the market becomes more institutional in its composition, it should also become more viable for a broader subset of consumers and investors.

These recent shifts towards a more regulated market in which institutions are increasingly willing to participate can help validate the intrinsic promise of digital currencies: that they will help to create a more transparent, seamless financial world.

Building trust is one of the most important enablers to realising that vision at scale. Ultimately, blockchain is underpinned by a system of trust, and that is why companies like Bittrex Global continue to foster innovation and advance the adoption of blockchain technology. In 2020, we can expect to see the market take some important steps in the right direction.



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