

CARDS

I N T E R N A T I O N A L

SMALL WORLD



HOW MOBILE AND PREPAID ARE CHANGING THE GAME FOR TRAVELLERS

INSIGHT

Already an Asian favourite, how QR codes can help build the cashless society

FEATURE

The new version of 3-D Secure is likely to find favour with merchants

COUNTRY SNAPSHOTS

Analysis and data for card payments in Croatia, New Zealand and Thailand

THIS MONTH

COVER STORY



TRAVEL

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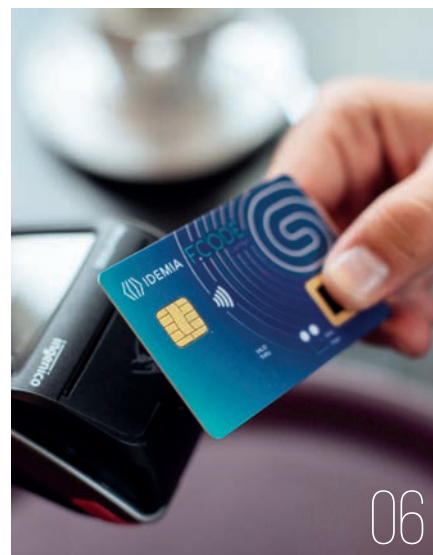


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Fewer than one in five payments in Sweden are made with cash, and the Indian government recently attempted to eradicate the country's currency altogether. **José Diaz** looks at how QR codes could lead the cashless society



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Prepaid cards have seen a boost from UK travellers. With Revolut and Monzo offering zero-to-low fees on currency exchange, it seems wise to take a card abroad – and usage bumps up in winter. **Patrick Brusnahan** writes



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EMV 3-DS 2.0 promises to reduce customer friction while significantly reducing fraud and false declines. Unlike the initial version, the new protocol is expected to see significant adoption. **Robin Arnfield** reports



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HEAR • NETWORK • DISCOVER • CELEBRATE

SHAPE THE FUTURE OF RETAIL BANKING

Retail Banking: Europe 2018

28th November 2018 • Hesperia Hotel, Madrid

Retail Banking: Europe 2018 is moving to Madrid for a day of discussion between traditional and challenger banks along with selected solution providers about the key issues of today in the European retail banking sector.

Key issues:

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- How to make the most of Open Banking
- How can traditional banks benefit from open APIs?
- PSD2 and fraud: What new trends are developing?
- Enhancing customer experience in the digital age
- The role of branches in the 21st century
- Adapting for the millennial customer
- Are mobile-only banks the future?
- The opportunities for blockchain and cryptocurrencies
- GDPR: The early experiences following implementation



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CARDS IN CIRCULATION HIT 15 BILLION



Douglas Blakey, Editor

The total number of payment cards in circulation worldwide reached 15 billion at the end of 2017, with UnionPay again holding the largest share.

The 15 billion figure represents an annual increase of 6%, according to RBR's recent report, *Global Payment Cards Data and Forecasts to 2023*. As the report correctly notes, there remain exciting further opportunities for card schemes as governments and central banks continue to encourage financial inclusion.

There is also encouraging news relating to unbanked and underbanked rates in the US. The percentage of US unbanked households in 2017 is down to 6.5% – the lowest US unbanked rate recorded since the FDIC first tracked the statistic in 2009.

The US unbanked household rate is down from 7% in 2015 and a high of 8.2% in 2011. The 2017 US unbanked numbers equate to 14.1 million adults, or 8.4 million households, not having a checking or savings account. The number of underbanked US households is also down compared to 2015 levels. In 2017, 18.7% of US households are considered underbanked; this equates to approximately 48.9 million adults in 24.2 million households.

For purposes of the survey, the term 'underbanked' refers to households that had an account at an insured institution but also obtained financial products or services from outside the banking system.

Chinese market continues to expand

Cards growth in China again increased in 2017 with around 9% more cards in circulation, according to RBR.

For many years, Visa and Mastercard cards in China were dual-badged with UnionPay, but a 2017 regulation prohibiting dual-badging means this is no longer the case. As all Chinese cards issued for domestic use must be UnionPay-branded, banks are typically issuing UnionPay-only cards to replace existing dual-badged ones, while customers can request an international card for use abroad.

Union Pay-branded cards accounted for 44% of the world's payment cards, increasing its share by one percentage point compared to the previous year. Visa (including Visa Electron,

V Pay and Interlink) and Mastercard (including Maestro and Mastercard Electronic) account for 21% and 16% of global cards respectively; if China is excluded, Visa's share is 36% and Mastercard's 27%.

The RBR report shows that domestic schemes, usually found in the debit sector, are declining in most markets, as they are either dual-badged with, or replaced by, international schemes. However, they have seen something of a rebirth in a number of large markets in recent years. For example, Indian scheme RuPay's important role in a financial inclusion campaign has seen its share of the country's cards rise to 49% since its launch in 2012.

Can Revolut crack Canada?

The phenomenal growth in customer numbers at Revolut is deservedly attracting headlines in the UK – and, increasingly, internationally. Revolut is now focused on expansion into international markets, and increasing the overall size of its customer base.

The Revolut party line is that it takes projects from idea to reality in a few weeks or months, and that it works faster than incumbent banks and with fewer layers of bureaucracy. A favourite current Revolut tale is that it launched its business with a few million, compared to RBS that has just announced a new challenger brand on which it has already spent £50m (\$64m) building.

Revolut plans to launch in the US, Canada, Hong Kong, Singapore, Japan, Australia and New Zealand, with a target of signing up 100 million customers in the next five years.

Its plans for Canada, in particular, catch the eye. Banking history is littered with international players that have invested time, money and energy in cracking the Canadian market; few have really made a go of it, as evidenced by the market shares of the big five Canadian lenders.

The established players are dug in, profitable and well led. The incumbents are also investing heavily in digital innovation and optimising customer experience. While I am loath to be negative regarding Revolut's international ambitions, I remain to be convinced that it will find the Canadian market an easy one to crack. ■

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

NEWS DIGEST

SafeCharge and World Duty Free offer WeChat Pay at Heathrow



WeChat Pay is now available at London Heathrow airport as a result of a collaboration between SafeCharge and World Duty Free, enabling Chinese travellers to use WeChat Pay for a range of duty-free purchases.

World Duty Free is using SafeCharge's mobile POS application which allows merchants to accept QR code-based solutions. This is often a key requirement for Chinese consumers, some of whom rarely pay with other methods.

According to VisitBritain, over 330,000 Chinese travellers visited the UK in the last year, pumping over £1bn (\$1.3bn) into the economy in 2017. WeChat Pay supports Chinese shoppers with higher transaction values, which also benefits merchants.

Tony O'Donnell, UK financial controller at World Duty Free, said: "Since the initial roll-out in Terminal 4, we have seen a steady increase in transaction volumes and are

currently in the process of extending this capability to other Heathrow terminals.

"SafeCharge has been instrumental in supporting our fast deployment with high-level quality support, and we look forward to working closely with the team as we continue to expand across more locations and concessions."

SafeCharge CEO David Avgi added: "Chinese shoppers are among the most tech-savvy in the world, and take the ability to go cashless and make mobile payments at home for granted.

"With Chinese tourism growing at a 20% rate every year, it has become vital for merchants to adapt to offer these valued customers the service and experience that they expect – and that means accepting Chinese alternative payment methods whether on-line, in their shops, pop-up stores or outdoor markets in order to remain competitive." ■

SOCGEN BIOMETRIC CARDS IN TRIAL PHASE

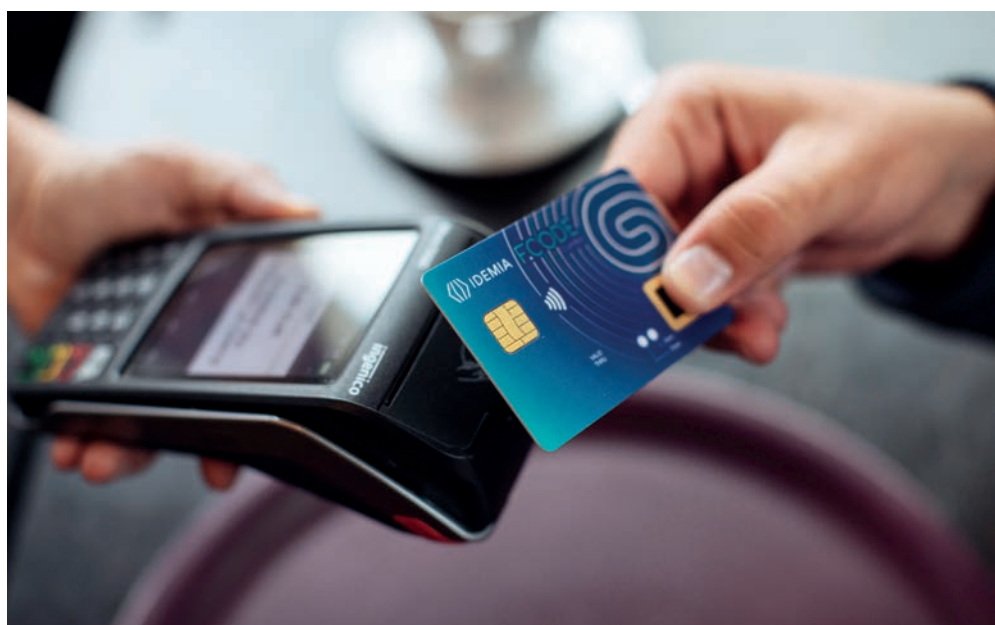
Société Générale (SocGen) biometric cards are now being tested to expand the bank's contactless capabilities in France.

Biometric capabilities are becoming increasingly popular in Europe and Asia, and SocGen was the first bank in France to launch new-generation cards equipped with a card verification value, gaining more than 400,000 customers in the process.

The bank now wants to achieve another French first with the launch of biometric cards fitted with fingerprint sensors, which will replace the PIN as the primary means of customer authentication. The card is based on F.code technology developed by Idemia.

The card functions normally for all in-store contact-type payments or online purchases, as well as for cash withdrawals; caps on contactless payments have also been removed. Cardholders record and verify fingerprint details directly onto the cards, with no element of the fingerprint transmitted to the merchant or bank.

Biometric attributes are almost impossible to forge or duplicate. Even if



a hacker manages to forge a fingerprint, modern biometric devices have the capability to identify fakes from originals.

Biometric technology helps to detect and prevent card fraud and can, as a result, increase levels of customer loyalty.

Merchants can also use the technology to significantly improve the consumer shopping experience.

The trialling of biometric cards is part of SocGen's ongoing strategy to continue to improve the overall user experience. ■

Visa Token Service adds 20 new partners

Visa has announced 20 new Visa Token Service partners, which the scheme says will help scale tokenisation to thousands of merchant clients and millions of customers.

Visa stated that the commercial expansion of the Visa Token Service for credential-on-file token requestors marks a major milestone towards further securing consumer payments in the digital channel.

The 20 acquirer gateway and technology partners that will be joining the Visa Token Service are Adyen, AsiaPay, Braintree, Checkout.com, Cherri Tech, CyberSource, Elavon, Ezidebit, eWAY, Fit-Pay, Giesecke & Devrient, PayPal, Payscout, Rambus, SafeCharge, SecureCo, Square, Stripe, Worldpay and YellowPepper.

The Visa Token Service is built on top of the EMVCo Payment Tokenisation Standard, and offers an added layer of security through

the use of tokenisation. The system replaces sensitive cardholder information, such as account numbers, with a unique 'token' that can be used for payments without putting customer details at risk. Expired or compromised payment credentials can be updated quickly and securely in the background, which Visa claims completely eliminates friction for consumers and merchants.

Senior vice-president of digital payment products at Visa, Ansar Ansari, stated: "Today, we welcome 20 partners into the Visa Token Service who will help scale tokenisation to their thousands of merchant clients and millions of customers around the world. Moreover, this opens up a world of possibilities for our merchants and partners to further evolve and innovate in digital payments."

"Making digital transactions even more secure is one of Visa's biggest priorities. Working with Visa, these partners will help secure cardholder data and make digital payments safer, resulting in frictionless digital commerce experiences for consumers."

Kamran Zaki, president of North America at Adyen, added: "Adyen is excited to be the first acquirer in the payments ecosystem with in-market solutions to support and offer Visa Token Service to our global merchants. In addition to improving security, Visa network tokens through Adyen will allow our merchants with cards on file to reduce involuntary churn and improve authorisation rates with no additional work on their part."

Visa has added over 60 global token requestors since the launch of the Visa Token Service in 2014. ■

Tinkoff Black card extends to 30 currencies



Holders of the Tinkoff Black card can now open multiple accounts in up to 30 currencies at a time, and exchange money instantaneously between currencies at attractive rates.

Russia's Tinkoff Bank is adding 26 currencies to the already-available Russian rouble, US dollar, UK pound and euro. New currency accounts can now be opened via the Tinkoff mobile app for iOS; the service will be available on the Android platform later this year.

Tinkoff customers can also link the multi-currency cards to Apple Pay, Samsung Pay and Google Pay. The currency mark-up for Tinkoff Black customers is rarely above the foreign exchange market rate plus 0.5%.

Anatoly Makeshin, head of payment systems and vice-president of Tinkoff Bank, said: "Tinkoff Bank customers are active

travellers. They use Tinkoff Black multi-currency cards on their international journeys.

"With 30 currencies now on the list, we give our clients a long-awaited opportunity to use Tinkoff Black more often, no matter where they choose to go.

"Holders of this easy-to-use multi-currency card do not have to worry how to best exchange their money while travelling. This option is now available in their smartphone. You first transfer money to the right currency account at an attractive rate. Customers can then link it to the card and continue using Tinkoff Black as usual."

Tinkoff is Russia's first and largest direct bank, with around 7 million customers. It is also the second-largest player in the Russian credit card market, with an 11.7% market share.

In June, Tinkoff Bank CEO Oliver Hughes, told *Retail Banker International*: "We are opening over 400,000 accounts per month across all products. In consumer current accounts, we are opening 120,000 new accounts per month."

Tinkoff's current account net promoter score of +57 is sector-leading, and the bank is on track to report annual net income growth in the 20-40% range to the end of fiscal 2019. ■

NAB, MICROSOFT TRIAL FACIAL-RECOGNITION ATM

National Bank of Australia (NAB) has collaborated with Microsoft to develop a proof-of-concept cardless ATM that will authenticate transactions through facial biometrics and a PIN.

The concept, which uses cloud and artificial intelligence technology, has been developed using Azure Cognitive Services.

NAB chief technology and operations officer Patrick Wright commented: "Working with companies like Microsoft allows us to develop concepts like this. It's a look into what the future might hold for the way our customers access banking products and services."

The ATM will store only biometric data, which is held on Microsoft's cloud platform. The technology provider said the data will be used only for authentication purposes, and will be removed after the experiment.

According to Microsoft, the new ATM concept will lower the risk of card fraud and skimming.

Microsoft Australia MD Steven Worrall said: "NAB's innovation focus is concentrated on meeting the changing needs of the customer; this concept ATM that NAB and Microsoft are working on together provides an important glimpse into the future." ■

Banca Popolare di Sondrio instant payments go live



Italy-based Banca Popolare di Sondrio's instant payments service aimed at retail and business customers has gone live.

The service uses SIA's EasyWay digital platform, and is directly connected to EBA Clearing's pan-European system for instant payments, RT1.

Banca Popolare di Sondrio's instant payments facility enable customers to make payments in less than 10 seconds. The current maximum payment is €15,000 (\$17,067), and the service is active 24/7, 365 days a year.

The SIA EasyWay digital platform used by Banca Popolare di Sondrio operates as a hub, simplifying the integration of instant payments with the internal systems of financial institutions, while reducing costs and activation times. An additional integrated service between Banca Popolare di Sondrio and SIA covers the entire value chain of the payment.

"We have always paid great attention to the area of payments to offer our customers exceptional services. We felt it was appro-

priate and necessary to propose instant payments to them," said Milo Gusmeroli, deputy general director and CIO at Banca Popolare di Sondrio.

"In creating our service, we called on the collaboration of SIA for a number of reasons: these include functional and technological know-how, as well as the guaranteed service levels – all this without forgetting to focus our attention on integration in the core operating systems in question, in addition to the so-called front-end, to improve the user experience of the customer."

Roberta Gobbi, director of SIA's financial institutions division, added: "We are especially proud to have created instant payments for Banca Popolare di Sondrio. This supports its leadership in innovation in a sector undergoing transformation such as that of electronic payments.

"Through our digital platform – to date still the most widely used in the Italian bank market – the banking group was able to get the new instant payments service up and running in just three months to all its private and business customers.

"This represents the beginning of a path of revitalisation undertaken by Banca Popolare di Sondrio in the payments area. SIA will support this with its technological competences, infrastructures and services". ■

BANCO BPI TO DEPLOY DIEBOLD NIXDORF SELF-SERVICE SOLUTION

Portuguese retail bank Banco BPI, part of CaixaBank Group, has entered into a new partnership to utilise Diebold Nixdorf's self-service solution.

The collaboration will enable the bank to deploy Diebold Nixdorf's multi-functional CS 4090 ATMs to provide cash recycling and other transactions.

Customers can use the systems to check account balances, deposit cash and coins, change notes into coins, deposit multiple cheques and order cheques.

The cash recycler acts as an important component to support BPI's first mobile branch, which aims to offer financial services in rural areas. The self-service solution has already been deployed at 40 of the bank's branches; another 45 are expected to implement the platform by the end of this year.

The second phase of the solution is expected to be integrated with the branch staff mobile application, and mobile and



home banking services by the end of the year. It will enable customers to carry out transactions traditionally carried out by the teller at bank branches.

Customers can also personalise information on their account statements, as can be carried out through a teller.

BPI's director of efficiency, Miguel Morais Leitão, said: "This new Self-Service Counter solution is one of the pillars of our digitalisation strategy, which aims to automate transactions and free up the sales teams so they can focus on selling more complex products and services." ■

TANDEM JOURNEY CARD LAUNCHES

Marking the business's fourth product launch in 10 months, the Tandem Journey Card is now available to the public.

The Tandem Journey Card is aimed at consumers who have not had credit before, and are aiming to build a strong credit portfolio. The card can also help consumers to be approved for car loans or mortgages, and allows customers to spend freely abroad while building their credit score.

UK challenger bank Tandem obtained its banking licence in January 2018, and very quickly launched its Cashback credit card. It continued to introduce new products, including three fixed saver accounts, and a mobile app that aggregates bank accounts to give users full visibility of their finances.

Tandem CEO Ricky Knox commented: "The team at Tandem have been working tirelessly to deliver a multitude of credit, savings and tech products to our customers. With the Journey Card, people can continue their spending abroad while benefiting from zero fees.

"The integration of credit products into our app is a game-changer for the industry. Our competitors have launched some great pre-loaded and debit cards, but we will own credit in this space."

Customers can apply for the credit card through the Tandem website. According to the copy on the application page: "When paid on time, and without going over your credit limit, you can build a healthy credit score. After a few months we'll review your limit and may offer you an increase."

The Journey Card offers no transaction fees on any purchases or cash withdrawals abroad, 56 days interest-free on any spend,



and a 24.9% representative variable APR.

Cardholders receive updates and other communications via the mobile app, which prevents loss of documentation or exposed account information. Powerful in-app budgeting tools are also available.

Sven Schindele, head of banking products at Tandem, said: "We are thrilled to be launching our second credit card. At Tandem, we are all about financial freedom and that comes from building a healthy credit score and getting the best from the money you have.

"We hope this card is your trusty companion for your next adventure." ■

GRAB TEAMS UP WITH MASTERCARD

Singapore-based ride-hailing business Grab has partnered with Mastercard to introduce prepaid cards and extend the use of its digital wallet in Southeast Asia.

The ride-hailing business, which entered the payments space last year, said the cards will work like a credit card, but instead of linking to a bank they will run on the Grab app e-wallet.

Grab will issue both physical and virtual prepaid cards through its app. Customers can top up their cards for in-store or online use through agents, drivers and merchants on the GrabPay platform. Grab intends to use the new prepaid cards to expand its offering to the over 400 million unbanked people in Southeast Asia.

Grab Financial senior MD Reuben Lai said: "This partnership goes beyond Grab issuing prepaid cards, and is a game-changer for Southeast Asia. We are the first e-wallet at scale from our region to be accepted worldwide.

"Not only does this solidify Grab's position as Southeast Asia's undisputed fintech leader, but it also enables the region's 400 million unbanked and underserved consumers to buy goods and services online."

Mastercard's executive vice-president of digital and emerging partnerships and new payment flows, Rama Sridhar, added: "Without changing infrastructure, we can now offer merchants the opportunity to tap into Grab's user base of emerging middle class consumers, covering one in six mobile phones in Southeast Asia." ■

Soft Space and PayNet to enable mobile acceptance of MyDebit cards

Malaysian payment solutions providers Soft Space and Payments Network Malaysia (PayNet) have partnered to launch a pilot scheme, Fasstap, to enable acceptance of MyDebit cards on mobiles.

MyDebit is the Malaysian debit scheme operated by PayNet. As part of the pilot, small businesses and sole-proprietors will be able to use NFC-enabled Android smartphones to accept and process MyDebit payments, eliminating the need for standard card POS terminals.

Mobile acceptance will be facilitated through the Fasstap application, which uses the Soft Space platform. The application is

also capable of processing certain contactless payments.

Soft Space CEO Joel Tay said: "While an NFC-based mobile payment application isn't new, utilising the hardware-embedded security technology within the smartphone to enable secure PIN entry and authorisation is a world first.

"Fasstap is unique in that it extends today's mPOS capabilities to make cashless payments accessible to a wider group of merchants, especially smaller-scale ones, in a cost-effective and secure way."

Soft Space added that the new payment technology will help merchants to avoid the

transaction fees associated with POS terminals used to accept MyDebit cards.

PayNet group CEO Peter Schiesser said: "In line with our objective to make cashless payments accessible to all Malaysians, we initiated a pilot to trial MyDebit acceptance through Fasstap, because the solution promises to significantly reduce the cost for merchants to accept card payments.

"Small businesses, including hawkers, street vendors and *pasar malam* traders, will need nothing more than their smartphones to collect debit card payments from their customers, once we are ready to go to a full commercial roll-out." ■

BITPAY: BRINGING CRYPTO TO THE MAINSTREAM

The cryptocurrency revolution, which started with Bitcoin in 2009, has both fascinated and concerned the financial industry. Still a new sector, BitPay marketing manager James Walpole explains why Bitcoin is a valid payment method, and how BitPay will make it mainstream. *Briony Richter* reports

Cryptocurrency has fluctuated rapidly in recent years, and its volatility has sent shockwaves across the financial industry and concerned many governments and regulators.

However, there are financial incentives to harness the power of Bitcoin and, more importantly, the technology behind it: blockchain.

Rather than attack it, BitPay set itself the task of proving that Bitcoin has the potential to be a valid global payment method, both for consumers and businesses. Speaking to *CI*, marketing manager, James Walpole describes what BitPay does, and how it will help Bitcoin and Bitcoin Cash to become the norm.

"BitPay is a leading worldwide platform for Bitcoin payment technology," he explains. "We work with Bitcoin and Bitcoin Cash all the way from merchant acceptance and merchant payment processing down to consumer level with the BitPay Wallet and BitPay card."

"We have had a lot of time to develop and get better at providing that service. It's certainly still new for many businesses, but with the core BitPay platform it actually makes it really easy. Businesses don't have to hold Bitcoin themselves."

"What happens with our BitPay payment to a merchant with our payment processing is that the consumer with Bitcoin is feeding it through Bitpay software. BitPay receives it, and then converts it into the merchant

currency. For example we have pounds, euros, US dollars. We then settle to the merchant's bank account. The process can be very easy to get up and running; obviously we are continuing to make it as smooth as possible."

BitPay makes it simple for businesses to hold Bitcoin. Asked why businesses do not just hold the cryptocurrency themselves, Walpole explains that everything can be done for the business: they do not have to understand Bitcoin, or have to deal with the security implications of holding it.

CRYPTO CARD ADVANTAGES

Bitcoin debit cards have become more popular in the past two years, with various options on the table for consumers to choose from.

The BitPay crypto card enables a customer to load the account with Bitcoin and spend the funds in BitPay-accepted currencies. The verification process for the card is fairly simple and quick. Within the app, users then head to the account page where they can load up the Bitcoins.

Expanding the advantages of the cards, Walpole notes: "The BitPay card is targeted towards individual users. From the beginning of our company we have tried to make Bitcoin usable for payments. Our cards give people who want to explore Bitcoin or live by Bitcoin a way to bridge to the next stage."

"The BitPay card is a Visa prepaid card which users in the US can use and load up with dollars. The unique thing about it is that BitPay acts as a loading mechanism, where users can load Bitcoin or Bitcoin Cash then it converts into dollars. The experience is fast, secure and seamless. It's one of the ways we are making life on Bitcoin easier for users in the US – and hopefully users around the world soon."

Only consumers in the US can currently hold the crypto cards, as earlier this year, BitPay announced that it was phasing out its crypto debit card services for European cardholders. Just as it does in the US, BitPay worked with issuing bank Wave Crest for its European services.

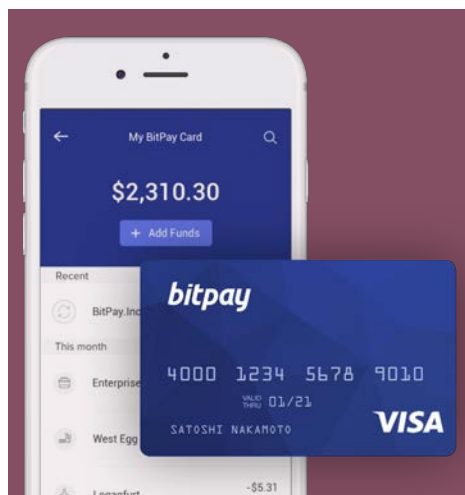
Speaking about the setback, Walpole explains that BitPay plans to continue its efforts to make the card available again to the rest of the world.

"In January, Visa decided to no longer work with Wave Crest – it was not related to BitPay or other companies dealing with cryptocurrency-related cards."

"As a result, that affected us and our cardholders. We had to make sure that people could claim refunds. It was an unfortunate change, but we are working to get the card back to Europe and other countries."

Bitcoin is still seen as a volatile commodity; however, BitPay wants to be able to securely bring it to the mainstream, and is very excited about its cross-border capabilities. Bitcoin can solve a lot of problems for businesses that are building both domestically and across borders.

Bitcoin crypto cards provide cryptocurrency enthusiasts the opportunity to live more independently using Bitcoin or Bitcoin Cash with BitPay. Nowadays you can a book a hotel, buy flights or even buy video games online with Bitcoin. It is becoming increasingly accepted by consumers in the mass market, and BitPay is aiming to be at forefront to ensure its success. ■



PREPAID CARDS: WARMING UP FOR WINTER TRAVEL

Prepaid cards have seen a boost when it comes to UK travellers. With offerings such as Revolut and Monzo offering zero-to-low fees on currency exchange, it seems a wise move to take a card abroad – and usage bumps up considerably in winter. **Patrick Brusnaban** writes

Spending habits change depending on the season in which you travel. According to data analytics company Consumer Intelligence, prepaid cards receive a boost in usage during winter.

UK holidaymakers travelling in winter are more likely to use prepaid now than previously. Close to 27% plan to use prepaid cards abroad, compared to only 23% in 2017. Prepaid cards are now nearly as popular as debit cards, which 28% of UK travellers in winter are planning to utilise. However, close to three-quarters (74%) will still take cash, down from 76% last year.

Andy Buller, key account director at Consumer Intelligence, believes there are many reasons for the rise in the winter season. Speaking to *CI*, he explains: “If you look at winter and why there’s an increase, there are a couple of major reasons. The first is where people don’t go on holiday during winter. If you look at places like Turkey, Egypt and Croatia, we refer to them as summer holiday destinations. In those places, they are not, from a technology standpoint, developed towards payments; it’s not that popular a method and they much prefer cash. Croatia’s population goes from four million to about 16 million people for three months of the year, and they’re geared towards cash.

“When you look at the winter months, people will be going skiing and to more exotic places. Skiing is much more expensive, but most of those countries are very much

Westernised or more developed. They’ll all be very payments-organised as people have to buy ski passes or ski gear, so you’re much more reliant on being able to accept payment from a piece of plastic – where it be prepaid, debit or credit. That has a huge influence.”

DESTINATIONS

In addition, the likely winter destinations have a strong infrastructure for plastic. Consumer Intelligence states that the most popular destinations are Spain at 22%, and the US and Canada in joint second with 11%. France and Germany make up the rest of the top five. These five countries are well versed in card payments (see table), so it makes sense to also use cards. Prepaid cards have many features that can also be handy abroad.

Buller says: “There’s an element of security that’s required [in countries like Spain and the US] and the financial markets there are good. ATMs are quite easy to find, but people

are probably are just wary of carrying large amounts of cash or what the rates are going to be like. There’s more of an influence of having a certain amount on a card that you can deactivate very easily, and having that capability in those markets.”

However, the rise in prepaid usage is down to the sheer number of options now available. “There are a lot more cards out there now. You look at Revolut, TransferWise, Monzo, there are a lot more cards. However, even though a lot of those innovations are trying to convince people to use them as their main bank account, the approaches they’ve taken in most cases have been through word of mouth or social media and they’re offering certain capabilities and services that are attractive to travellers,” Buller explains.

Despite the prevalence of these cards, however, it does not often translate to more than holiday money. As Buller notes: “They hope that they will be able to cross-sell them into using it as their main account; in most cases they are not successful in achieving that. What they have done very well is they have a large mass of people now with the card, but they are still just using them for certain requirements, such as holiday money.”

The prepaid rise may continue, but banks are making efforts to get back into the game. Buller predicts a “concerted effort” from the incumbents to win customers back in this market, particularly when it comes to fees.

He says: “A lot of the plastic cards are all Visa and Mastercard, and the trouble is that they make it more expensive because they add their own margin, before banks put their margins on using cards abroad.

“Hopefully, we’ll do away with this fee thanks to fintech, and the market will become more competitive. Revolut doesn’t use the Mastercard margin, it uses the Mastercard network. I anticipate a lot more technology driving their education of costs of fees which makes debit card abroad easier and making those cards more accepted.”

So what does this spell for cash? Despite multiple headlines across global titles predicting the cashless revolution, it remains in the distant future.

Buller concludes: “A lot of people think cash will go away, but it’s not. In certain markets, the behaviour is driven by the economy in those markets. You’re not going to suddenly see Croatia push for plastic any time soon as it doesn’t suit their seasonal requirements. It will be part of a package; they’ll get some cash and a card and it will be based on the different markets they go to.” ■

KEY WINTER DESTINATIONS

	Cards per inhabitant	POS penetration (per 100 people)
Spain	1.7	38
US	4.5	35
Canada	2.6	39
France	1.2	22
Germany	1.8	10

Source: GlobalData

PELIKIN: READY FOR LIFE AS A HIGH FLYER?

One thing that remains popular with the multiple fintechs launching across the world is helping with travel money. Monzo, Tandem, Revolut and many others have offered fee-free travel experiences with money exchange or ATM withdrawals. Pelikin aims to offer the same to Australian consumers. *Patrick Brusnahan* speaks to CEO Sam Brown

Cards International: What is the story behind Pelikin? Take me from the idea to where we are now.

Sam Brown: The product we're building at Pelikin was initially motivated by the experiences of our team – particularly those of me and my good friend, and our product manager, Matt. We've done a fair bit of travel and suffered first-hand the expensive and frustrating consequences of using a travel card overseas.

Then we started to talk to other travellers, other young Australians about their experiences abroad with their money, and started to realise the magnitude of the problem and also the magnitude of the opportunity for a customer-centric product to disrupt a seemingly stale industry.

The ideology was pretty simple: let's make a product that lets people access, send and spend their money overseas, just like they would in Australia; that's what we've always been, and are extremely close to achieving it.

Building a financial service and not coming from a finance background has definitely had its challenges, but we've made it happen through a lot of hard work and through building a great group of team members and advisors to help us bring Pelikin to the market.

We're focused on fixing a problem, a really big problem, so we've established relationships with some major financial institutions to

allow us to build the product that will fix it. The crutch of this is our relationship with Tuxedo Money [just acquired by Omnio]; these guys are global leaders in multi-currency and payment cards space and with them we've been able to build an incredible product.

Our approach is to build a product with a strong value proposition, get it in the hands



**OUR APPROACH IS
TO BUILD A PRODUCT
WITH A STRONG VALUE
PROPOSITION**

of customers early, learn what they hate and what they love, and iterate to make sure that we're always building our product with their interests first. We're not a bank, but we might be one day. For now, we'll let the ex-bankers build banks and we'll focus on fixing the real problem and helping millions of Aussie travellers.

CI: What is Pelikin's USP? What products and services will you offer?

SB: We're all about travel – about helping young Australians save and prepare for their trips overseas, and helping them to manage, spend and send their money while they're travelling.

The bare bones of our product is a multi-currency account – built only for mobile – and a prepaid Visa that can be used all over the world to send money, spend money and save money while you're doing it.

This means Pelikin users will be able to pay like a local overseas without transaction fees, get paid, pay people, or split bills with friends on the spot in the local currency and freeze and unfreeze their accounts and cards if you happen to lose your wallet, with just a simple double-tap.

We've done away with clunky account numbers, allowing users to interact with each other using their unique Pelikin @handle – just like Twitter. We've had a bit of fun with our card too, taking a little inspiration from Monzo, with a super-bright neon yellow design – I think we might have them covered for brightness!

We've also developed some awesome travel savings tools for both solo travellers and group travellers, which will help them save money, plan their trips and have a little fun while they're doing it.



Sam Brown, Pelikin

CI: Who is the target market? How are they underserved? And do you have any targets for customer or account numbers in the first year or five years?

SB: We're targeting young Australians – in other words, millennials. These groups are more tech-savvy, globally minded and digitally connected than ever before. Building a product with them, and for them, has been both challenging and a lot of fun.

When it comes to how millennials spend their money, we're witnessing a strong trend towards travelling around the world and seeking new experiences, rather than following the traditional path of taking on big debt, for things like home loans.

For myself and millions of other young Aussies around the country, travel is a massive

part of our lives, yet the way we travel with our money hasn't improved for decades. They're being underserved!

Products currently available in the travel money market aren't growing with this group,

travel money products offered by banks and traditional travel card providers aren't being developed with their customers' interests in mind, but rather revenue.

I could go on for days, but to summarise, we think that the majority of travel money products are currently favouring the service provider over the customer, so our mission is to balance things up, put the customer first and be the number-one alternative to the traditional players.

CI: Do you have any competitors in the market?

SB: We're commonly thrown into the 'challenger' bank conversation, which we don't mind at all, but ultimately we are not building Pelikin to be just another alternative to everyday banking in Australia. We've built Pelikin to fix the problem of managing, sending and spending your money while you're travelling the world.

When we enter the market, our major competitors will be the travel products that are currently provided by the banks. It's their products that have been the driving motivation to create Pelikin, so we're really confident that we'll be able to impact the market from day one with our customer-

“ WE THINK THAT THE MAJORITY OF TRAVEL MONEY PRODUCTS ARE CURRENTLY FAVOURING THE SERVICE PROVIDER OVER THE CUSTOMER ”

and are nowhere meeting their expectations. They lack, inspiration, transparency and – most importantly – innovation, but what's really broken with this industry is that current

centric product that offers everything you need to prepare financially for travel, and then allows you to save time and money while you're abroad.



CI: Is this a good time to be innovative in Australia? The financial sector seems about ready for a lot of new entrants.

SB: It's always a good time to innovate! But in the financial sector, innovation can be tricky as there are lots of other moving parts to consider – obviously in dealing with people's money, and at all times making sure you're ticking all of your regulatory boxes.

Consumers are definitely ready for innovative payment products, but just because you're innovative it doesn't mean you're fixing a problem, so at the core of all innovation I think you need to make sure you're doing something that serves a genuine purpose and makes life easier for your customers. ■



EMV 3-DS 2.0 promises to reduce customer friction at e-checkouts, while significantly reducing fraud and false declines. Unlike the initial version of 3-DS, the new protocol is expected to see significant adoption by e-merchants. **Robin Arnfield** talks to Ryan Wilks, VP of customer success at Mastercard-owned NuData Security, and senior Aite Group analyst Julie Conroy

In October 2016, EMV standards body EMVCo, owned by Amex, Discover, JCB, Mastercard, China UnionPay and Visa, published version 2.0 of EMV Three-Domain Secure (3-DS).

Developed in 1999, the 3-DS protocol is offered to merchants and issuers by the card schemes under their own branding: Verified by Visa, JCB J/Secure, Amex SafeKey, Discover ProtectBuy, and Mastercard SecureCode (3-DS 1.0) and Mastercard Identity Check (3-DS 2.0).

For merchants, the benefit of using 3-DS is that liability for fraud is shifted to issuers, and lower interchange rates are generated.

According to Conroy's Aite Group report, *3-D Secure 2.0: Key Considerations for Card Issuers*, 3-DS 2.0 has the potential to be a key

tool in the arsenal of issuers and merchants. "This new-and-improved version of the 3-DS protocol will provide an enhanced data stream between issuers and merchants to better inform authentication and authorization decisions," the report says.

USER EXPERIENCE

"In its initial version, 3-DS was viewed by many merchants as a sales-prevention tool rather than a fraud-prevention solution, due to its clunky user experience," Conroy explains to *CI*.

"A webinar NuData did in North America found that 68% of webinar participants whom we surveyed, didn't use 3-DS 1.0, as it was such a poor user experience," adds

Wilks. "There was too much friction, and the merchants couldn't control the customer experience."

"Very few people in North America have set up 3-DS passwords for online use of their credit cards, so merchants developed their own fraud-prevention systems to safeguard and retain control of the user experience, which is paramount in e-commerce."

Wilks says the five card schemes are now going through their final 3-DS 2.0 certifications on their servers, and merchants are actively getting ready to integrate the new protocol.

3-DS 2.0 VERSUS 1.0

3-DS 2.0 replaces the static passwords required by 3-DS 1.0 with risk-based authentication via an access-control server controlled by the issuer and a 3-DS server module operated by the merchant – formerly known as a merchant plugin for 3-DS 1.0. This means cardholders are not required to register cards or set up passwords.

Risk-based authentication involves contextual data from the merchant, cardholder and merchant transaction history, and transaction characteristics such as purchase amount, device ID and location.

"With risk-based authentication, merchants can make an intelligent decision as to whether the transaction is genuine and let it proceed without any friction," says Wilks.

OBJECTIVES OF 3D SECURE 2.0

1. Support authentication based on data elements shared through the protocol, with focus on a frictionless shopping experience for the cardholder;
2. Make the message interface and authentication flows amenable to mobile platforms – multi-device, device-agnostic, multi-channel, etc.;
3. Make the technology future-proof with support for digital wallets and other forms of digital payment;
4. Align to country-specific and regulatory requirements, and
5. Move from static authentication to dynamic authentication when necessary.

Source: CA Technologies, *Summary of 3-D Secure 2.0*

“If they feel there is a risk and they need to issue a challenge, they can ask the cardholder for more identification to prove they are genuine. For example, the cardholder might have to click a button in their mobile banking app to prove it is them.”

“3-DS 1.0.2, the most recent 3-DS version prior to 2.0, also uses risk-based authentication, and is far superior to what we saw initially,” says Conroy. “But the confines of the initial version of 3-DS, most notably the limited data it allowed to be transmitted, meant there were only so many improvements that could be made to it.”

DATA ELEMENTS

While 3-DS 1.0 supports 15 data elements, the 3-DS 2.0 data set has significantly expanded with over 150 data elements, some of which are mandatory and others are optional. 3-DS 2.0 also works with mobile apps, whereas 3-DS 1.0 was browser-based.

“A benefit of 3-DS 2.0 is that merchants retain control of the user experience,” says Wilks. “They decide whether they want to send transactions down the 3-DS route for authentication or not.”

“
**A BENEFIT OF 3-DS 2.0
IS THAT MERCHANTS
RETAIN CONTROL OF
THE USER EXPERIENCE**

This option is also offered by 3-DS 1.0.2, which is why it is already used by large numbers of North American merchants, Conroy notes.

With 3-DS 2.0, merchants can turn on 3-DS in non-challenge mode so that they can feed 3-DS data into their own risk models and use that to inform their own approve-or-decline decisions. The downside of opting out is that their decisions are not covered by the liability shift.

Where further authentication is required in 3-DS 2.0, issuers use dynamic authentication such as one-time passcodes that are sent to the cardholder's phone, or biometrics. In this

WHAT IS 3-D SECURE?

EMV Three-Domain Secure (3-DS) is a messaging protocol developed by EMVCo to enable consumers to authenticate themselves with their card issuer when making card-not-present (CNP) e-commerce purchases.

The additional security layer helps prevent unauthorised CNP transactions and protects the merchant from CNP exposure to fraud.

The three domains are the merchant/acquirer domain, the issuer domain, and the interoperability domain, such as payment systems.

WHY A NEW SPECIFICATION?

To reflect current and future market requirements, the payments industry recognised the need to create a new specification that would support app-based authentication and integration with digital wallets, as well as traditional browser-based e-commerce transactions.

This led to EMVCo's development of a new industry specification: EMV 3-D Secure—Protocol and Core Functions Specification – that takes into account these new payment channels and supports the delivery of industry-leading security, performance and user experience.

way, 3-DS 2.0 does not impose barriers on cardholders trying to complete an e-commerce purchase, whereas 3-DS 1.0 led to a high purchase e-checkout abandonment rate.

To send transactions through the 3-DS 2.0 protocol, all participants must go through the EMVCo testing and certification process. Visa's 3-DS 2.0 program rules become effective from April 2019 globally.

In 2019, Mastercard will replace SecureCode with the 3-DS 2.0-based Mastercard Identity Check protocol, which will use biometrics as a second factor of authentication. According to Mastercard's website, Mastercard will no longer support 3-DS 1.0 on its network from the fourth quarter of 2020.

PSD2

From September 2019, under PSD2 regulations, the EU will impose a requirement for strong customer authentication (SCA) for online payments above €30 (\$34.13).

The SCA regulation requires that electronic payments are authenticated using two of the three multi-factor categories: knowledge (something you know), possession (something you have), and inherence (something you are).

Mastercard is encouraging the use of biometrics such as scanning fingerprints on a smartphone as a second authentication factor, while Visa's approach is to recommend one-time passcodes sent via SMS.

The Reserve Bank of India will also mandate use of 3-DS 2.0, says Wilks, but in

North America there will be no regulatory mandate to use the protocol.

FALSE DECLINES

“When I talk to merchants and issuers about 3-DS 2.0, they say the promise of the new protocol is that not only will it help to reduce fraud, but it will really help to reduce the big false-decline problem in e-commerce,” says Conroy.

On aggregate, there is only an 80-85% approval rate for card-not-present (CNP) transactions, compared to 95% for card-present transactions, says Conroy.

With the additional data elements in 3-DS 2.0, merchants see an opportunity to significantly reduce the 20% false-decline rate they experience.

“This represents new revenues for them,” Conroy says. “Obviously, they want to reduce CNP fraud, but they already build their fraud losses into their profit and loss as the cost of doing business.”

Conroy is optimistic that 3-DS 2.0 will gain significant adoption. “The adoption curve will vary from regulated to non-regulated markets,” she says. “The issuers I talk to in Europe expect that, very quickly, over 90% of European CNP transactions will use 3-DS 2.0. Currently, 3-DS usage in Europe varies from 25% to 50%, depending on the different regions of Europe.

“In the US, we'll see the rate of CNP transactions using 3-DS go from 2% to 10% in the next few years.” ■



COUNTRY SNAPSHOT: CROATIA

High banked population leads to growth in card use

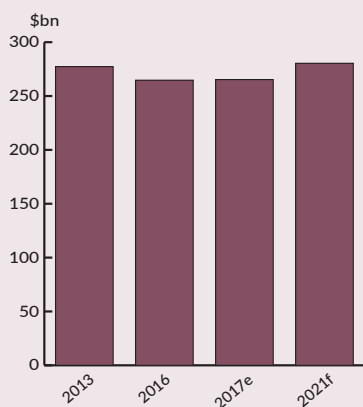
Croatia's payment card market is growing, with a penetration rate of 2.1 cards per inhabitant in 2017, mainly as a result of the country's high

banked population. Despite this, frequency of payment card use in Croatia is one of the lowest among its peer countries, reflecting the cash-dominated nature of the Croatian

economy and limited financial awareness among consumers.

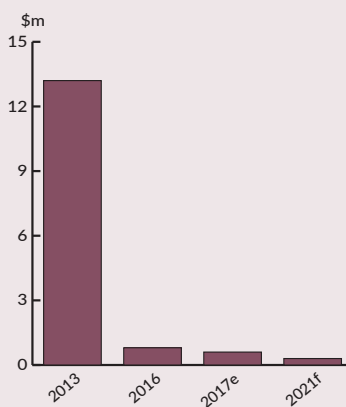
However, with a recovering economy, improved banking infrastructure, lower

VALUE OF CREDIT TRANSFERS



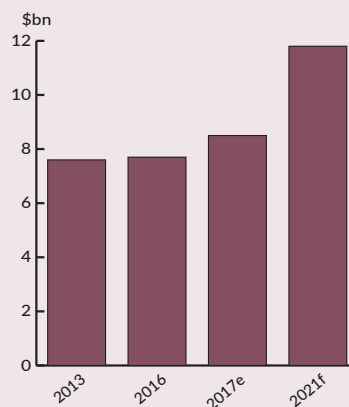
Source: Croatian National Bank, GlobalData

VALUE OF CHEQUE PAYMENTS



Source: Croatian National Bank, GlobalData

VALUE OF PAYMENT CARDS



Source: Croatian National Bank, GlobalData

interchange fees and wider acceptance of payment cards, the market is set to improve. The volume of payment card transactions and frequency of use are anticipated to record robust five-year CAGRs of 6.4% and 5.3% respectively.

Debit cards remain the largest card type in terms of transaction value, followed by charge and credit cards. This indicates consumers' desire to make payments immediately using debit cards, or to repay outstanding amounts in full to avoid debt.

The emergence of contactless technology and e-commerce growth are also anticipated to support the payment card market. Rising investment in POS infrastructure and the proliferation of new payment solutions will also drive electronic payments in the country.

DEBIT CARDS DOMINATE

The high banked population and debt-averse nature of Croatian consumers have increased debit card penetration, as the cards tend to be offered free of charge with a bank account.

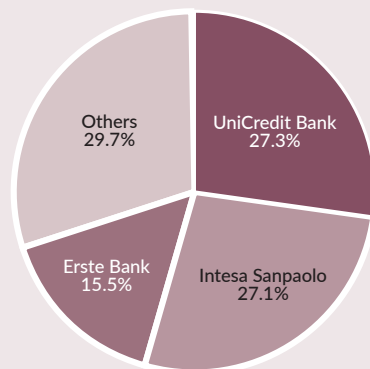
Banks are also adopting strategies to cross-sell debit cards by bundling them with savings accounts for different customer needs. Zagrebačka Banka, part of UniCredit Group, serves consumers aged up to 29 through its Package for the Youth, which includes a current account and a complementary contactless Maestro or Visa Electron card with a giro account. The card also offers student loans with no processing fee. Cardholders can pay in instalments for both in-store and online payments using a Maestro card.

Despite high penetration, debit card use is mostly restricted to cash withdrawals. ATMs accounted for 69.8% of the total debit card transaction value in 2017, and the average ATM transaction value is far higher than at the POS, implying that consumers withdraw large amounts to meet liquidity requirements.

CREDIT CARDS STRUGGLE

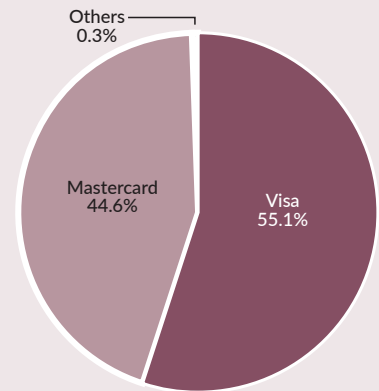
Pay-later cards are not popular in Croatia, accounting for 19.6% of the total card transaction value in 2017. The number of pay-later cards fell to 2014, mainly as a result of uncertain economic conditions and rising unemployment, which made consumers cautious about credit card spending.

DEBIT CARD SHARES BY ISSUER



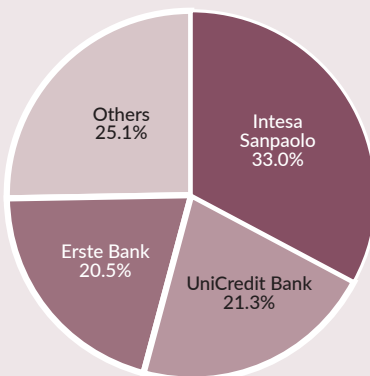
Source: GlobalData

DEBIT CARD SHARES BY SCHEME



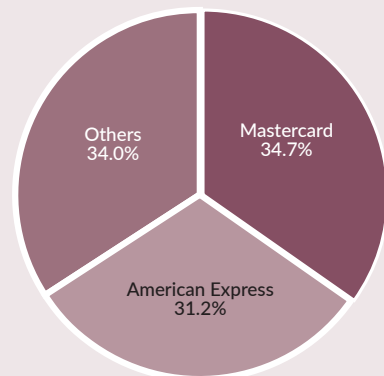
Source: GlobalData

PAY LATER SHARES BY ISSUER



Source: GlobalData

PAY LATER SHARES BY SCHEME



Source: GlobalData

However, there has been a rise in pay-later cards in circulation since 2015 following a recovery in domestic demand, growing employment, and rising personal disposable income.

Banks offer multiple benefits and value-added services, including instalment facilities, reward points, cashback and discounts at partner retailers.

OTP Bank offers the Visa Classic Instalment credit card that allows holders to convert purchases, including online, into up to 12 monthly instalments. Holders are also entitled to special benefits and discounts at participating merchants.

E-COMMERCE TO GROW

The value of e-commerce in Croatia grew from HRK1.9bn (\$299.57m) in 2013 to \$470.25m in 2017; it is anticipated to reach \$646.98m by 2021.

Growth in the past five years was a result of rising online and mobile penetration, and

increased consumer confidence in online transactions.

The e-commerce market is acting as a driver of payment card market growth in Croatia. Banks offer cards exclusively for online purchases, while the availability of alternative payment solutions such as PayPal and paysafecard for online transactions will also boost the e-commerce market.

PREPAID CARDS GAIN

The number of prepaid cards in circulation has been rising, and the trend is expected to continue over the next five years. A range of prepaid card variants are issued on the Visa and Mastercard networks.

Gift cards are popular among Croatian consumers, with most banks offering them. PBZ offers a Maestro gift card with a fund limit of \$159.46, while Zagrebačka Banka offers the Visa gift card with fund values from \$15.95 to \$175.41. ■



COUNTRY SNAPSHOT: NEW ZEALAND

Large banked population leads to high levels of card penetration

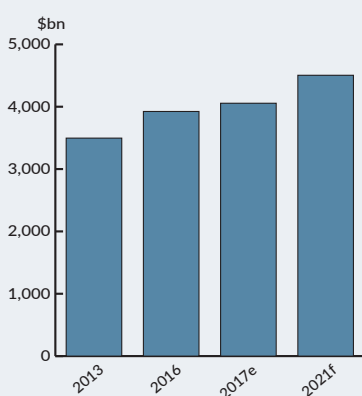
New Zealand's cards and payments industry is well developed, and consumers are prolific users of payment cards.

According to a February 2016 Mastercard survey, New Zealand has the lowest cash use among the OECD countries, and around half of survey

participants expected cash payments to cease in the following 10 years.

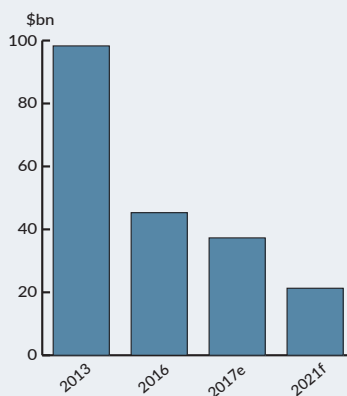
A large banked population and strong financial awareness among New Zealanders

VALUE OF CREDIT TRANSFERS



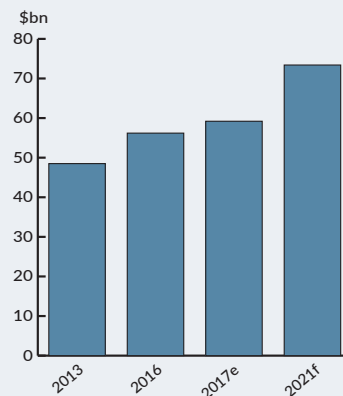
Source: Payments NZ, GlobalData

VALUE OF CHEQUE PAYMENTS



Source: Payments NZ, GlobalData

VALUE OF PAYMENT CARDS



Source: Payments NZ, GlobalData

have driven payment card penetration in the country. The frequency of use of payment cards in New Zealand stood at 117.0 in 2017 – the highest figure among its peer countries.

At the core of the payment market is wide consumer adoption of debit cards and Eftpos, which has been the main driver behind the growth in all non-cash payments.

New Zealand is a highly mature market in terms of card penetration, although consumers tend not to favour credit cards as a payment option. Mobile payments need to focus on replicating the convenience of debit cards, which have benefited from the widespread roll-out of contactless payments.

PAY-LATER MARKET

Consumers in New Zealand have traditionally been debt-conscious, and prefer to pay with available funds rather than on credit. Banks offer a range of benefits to encourage pay-later card use, including reward programmes, balance-transfer services, and lower interest rates on card transactions.

A number of non-bank players are also attempting to establish themselves in this space. For instance, financial services provider Gem offers the Visa credit card with 0% interest for the first six months on transactions above NZ\$250 (\$177.40). Similarly, Warehouse Money offers the Warehouse money Visa and Purple Visa credit cards.

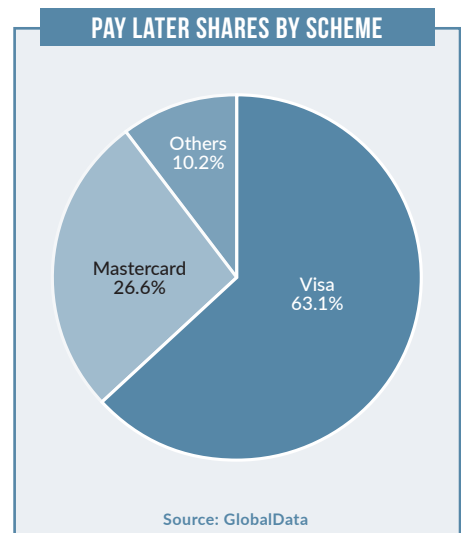
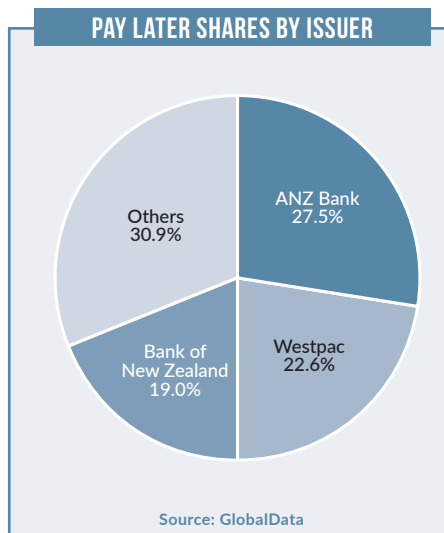
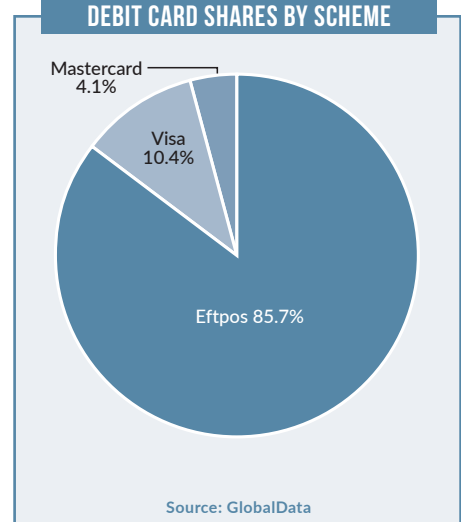
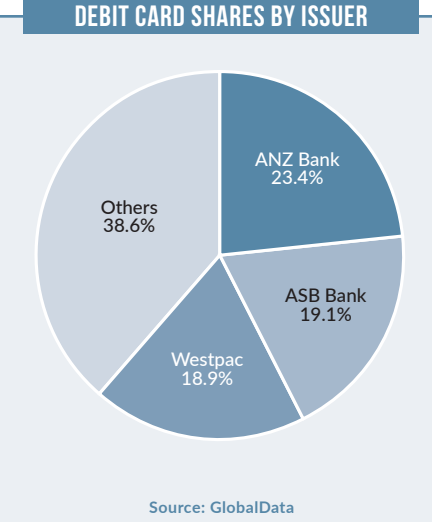
DEBIT CARD PENETRATION

New Zealand's banking sector is close to saturation, and the percentage of New Zealanders aged 15 or above with a bank account reached 99.6% in 2017, according to the World Bank's *Global Findex* database.

The near-saturation and rising competition have driven banks to target niche segments such as immigrants. For instance, ANZ Bank offers a Migrant Banking Package, which includes a current account, a debit card and a credit card. Account holders are also eligible for personal loans.

RAPID E-COMMERCE GROWTH

E-commerce in New Zealand is anticipated to record a CAGR of 8.6% between 2018



and 2022. Widespread digital access in the form of growing internet and mobile penetration is a key growth driver. New Zealanders prefer traditional payment tools such as debit and credit cards for e-commerce transactions, but emerging payment methods are growing in popularity.

The state-owned New Zealand Post Group offers assistance to domestic companies, helping them develop e-commerce operations by offering services such as demand generation, supply chain management, and after-sales services.

CONTACTLESS ADOPTION

Contactless payments are gaining prominence in New Zealand, with all the country's major banks offering cards with contactless functionality. As a result, New Zealanders are keen users of contactless.

Mastercard collaborated with ANZ Bank, ASB Bank, BNZ, and Westpac to launch

the Switch On campaign and website in July 2017 to educate retailers about the benefits of contactless payments, with the aim of further increasing acceptance.

MPOS TERMINALS

Competition for small payments is rising, with mPOS solutions challenging conventional models. In November 2017, Kiwibank launched its QuickPay mPOS solution, which includes the QuickPay mobile app and card reader, allowing merchants to accept payments with a mobile phone.

In May 2015, BNZ and payments solutions provider Mint Payments launched PayClip, an mPOS payment solution allowing merchants to accept card payments, and in March 2015, ANZ Bank launched its updated FastPay mobile payment app, which allows merchants to process Visa, Mastercard, and Eftpos transactions with smartphones. ■

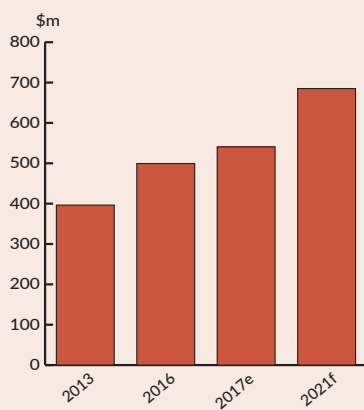


Cash remains the preferred method of payment in Thailand, accounting for 96% of the total payment transaction volume in 2017.

However, card payments are set to increase in popularity in the near future, as the Thai government and banks strive to provide basic banking services to the

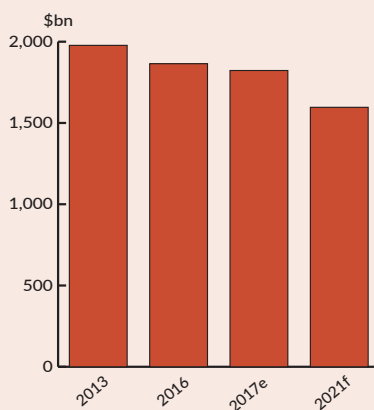
unbanked population and improve financial awareness. Expansions of the POS and QR code-based payment networks will also be a key factor.

VALUE OF CREDIT TRANSFERS



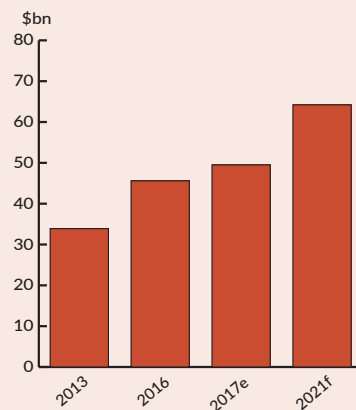
Source: Bank of Thailand, GlobalData

VALUE OF CHEQUE PAYMENTS



Source: Bank of Thailand, GlobalData

VALUE OF PAYMENT CARDS



Source: Bank of Thailand, GlobalData

The central bank has taken a number of steps to create a steady financial environment and drive the country towards becoming a cashless economy. In 2016, it articulated a three-year strategic plan (2017-2019), focusing on financial and economic stability in the country and making financial products and services economical and accessible to every citizen.

In March 2016, the Financial Sector Master Plan Phase III (2016-2020) was launched to help the government, business and retail sectors create an environment and infrastructure conducive to the adoption of electronic and financial payments in the country. Initiatives included the development of a robust payment infrastructure, boosting consumer financial literacy, efficient pricing mechanisms, the establishment of an integrated IT system, and industry-wide shared infrastructure and fraud-monitoring systems.

DEBIT CARD USE

The Thai central bank introduced new debit card regulations in March 2016 to develop secure debit card payments and enhance consumer confidence in the overall financial system.

The regulations required all newly issued debit and ATM cards to be chip-based, with magnetic stripe debit cards to be upgraded by 31 December 2019.

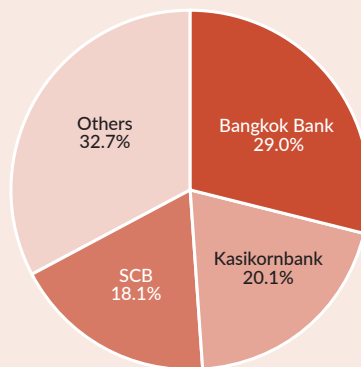
In addition, all domestic transactions from the newly issued debit cards must be processed by local debit card scheme provider Thai Payment Network. For international transactions, banks can co-badge with international debit card scheme providers.

PAY-LATER REGULATION

Household debt was high between 2013 and 2017, with loans to households from financial institutions accounting for 77.5% of total GDP in 2017.

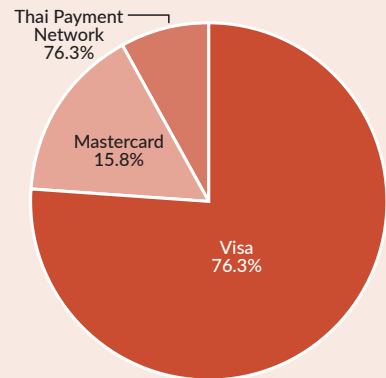
The central bank has enforced stringent credit card issuance and personal loan regulations. With effect from 1 September 2017, all banks are required to cap interest rates at 18% per annum, down from 20%. Credit lines for new card holders were also limited in accordance with their monthly salaries, enabling issuers to identify creditworthy individuals and reduce levels of default.

DEBIT CARD SHARES BY ISSUER



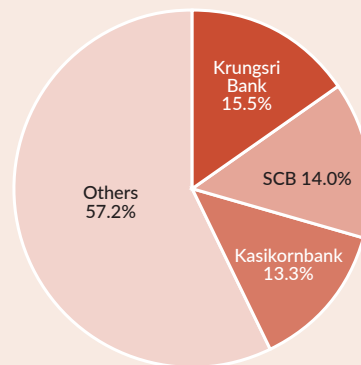
Source: GlobalData

DEBIT CARD SHARES BY SCHEME



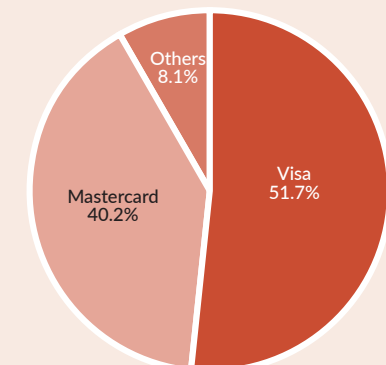
Source: GlobalData

PAY LATER SHARES BY ISSUER



Source: GlobalData

PAY LATER SHARES BY SCHEME



Source: GlobalData

E-COMMERCE GROWTH

The Thai e-commerce market recorded a CAGR of 30.4% between 2013 and 2017 as a result of rising mobile and online penetration, the growing presence of online gateways, and increasing consumer confidence in online transactions. This growth has attracted international companies to the Thai e-commerce market.

Credit cards are the most used online payment instrument in Thailand, although virtual payment cards and alternative payment solutions including PayPal, TrueMoney, AirPay, Masterpass and mPay have also supported e-commerce growth.

PREPAID ADOPTION

Prepaid card acceptance is growing among Thai consumers, who tend to spend within their means. The prepaid cards volume and transaction value recorded respective five-year CAGRs of 18.0% and 24.4%.

Prepaid fleet cards are gaining popularity. TMB Bank provides a prepaid fleet gift card that is valid for one year from the date of purchase and can be used to pay for fuel at participating gas stations. Similarly, Bangkok Bank's Shell prepaid card can be used both as a prepaid gift card and to buy fuel at all Shell stations in Thailand.

INFRASTRUCTURE GROWTH

The number of ATMs in Thailand rose from 56,851 in 2013 to 64,859 in 2017; by 2021 the figure is expected to reach 69,541. Similarly, the number of POS terminals rose from 311,356 in 2013 to 711,211 in 2017, and is expected to reach 930,022 by 2021.

With the rising number of POS terminals at retail outlets, card-based payments are expected to grow. To accelerate e-payment acceptance in Thailand, the Ministry of Finance collaborated with commercial banks to launch 550,000 electronic data-capture terminals countrywide in 2017. ■

QR CODES: THE FUTURE WITH NO SECURITY SHAKE-UP

Card payments in the UK outnumber those made in cash, fewer than one in five payments in Sweden are made with cash, and the Indian government recently attempted to eradicate its currency altogether. *José Diaz*, director of payment strategy at Thales eSecurity, looks at how QR codes could take over

To reach its tipping point, cashless payment technology has come on a long way since the first magnetic stripe card almost 50 years ago.

The development of chip and PIN addressed concerns over security, before the emergence of contactless catered to consumer demands for greater convenience. Today, a new stage in the evolution of payments is growing in popularity. QR codes, already widely used in Asia, will eventually make their way to the rest of the world, offering merchants and consumers alike a simple and secure means of carrying out transactions.

New technologies, particularly in advances in payments, will inevitably bring with them new security concerns. However, by making security a priority regardless of the method or technology used, a development such as QR codes need not shake up the industry.

CONVENIENCE IS KING

The prime benefit of QR codes as a payment method is the convenience they offer. Consumers do not need a mobile device containing the latest NFC, Samsung or Apple Pay technology to make a payment – if a merchant has a scanner, the customer is able to present a QR code on their mobile device as a means of payment.

The opportunity for a broader deployment is significant. By way of illustration, Paytm is a standards-based platform that has been rolled out across India as part of the government's 'demonetisation' initiative. Rather than being a top-end merchant-based offer, the aim of Paytm was ubiquity – that it would become THE way to transact in India.

QR codes hold benefits for merchants too. Consider the Walmart Pay application where, rather than the typical payment process in which consumers present their payment method to the merchant, a QR code conveys the transaction information to the app on their mobile device where the payment is initiated.

Smaller merchants, those without a POS device or even a checkout, such as the increasing number of pop-up food stalls that in the past would have been cash-only, can now enable a consumer to scan a QR code to push a payment in a merchant's direction.

One challenge, however, is that not all retailers have the necessary scanners to read QR codes. However, this may be a simpler option than upgrading payment terminals to accept contactless or NFC payments, or they can choose to provide a QR code that consumers can use to initiate a payment.

INTEROPERABILITY

Use of QR codes as a payment activity is currently predominantly in Asia. WeChat Pay, for example, is one of the most popular mobile payment solutions in China, with around 600 million users, closely followed by Alipay, with around 400 million. In fact, Alipay overtook PayPal as the world's largest mobile payment platform in 2013.

In trying to accept Alipay as a means of transacting with Chinese customers, for example, US merchants have found to their cost that platforms such as these are not easily interoperable with more traditional approaches, and often require special arrangements and specialised solutions.

Standards developed by EMVCo, a consortium comprising the major payment card companies, will go some way to remedying this situation and, by making them more interoperable, allow QR codes to become a more global option. According to EMVCo: "The clarity provided by the specifications will enable merchants to accept QR Code payment solutions from various providers in a standardised manner. Consumers will also benefit from a more uniform experience that offers greater convenience and flexibility."

ROOT OF TRUST

The cashless security model has changed considerably since chip-enabled payments, in which everything was pinned to the authenticated consumer. As with mobile payments, QR codes have the ability to present dynamic or verifiable information and not depend on a static piece of information – and here can lie the danger. Take the Starbucks Wallet: all that is scanned here is a customer's ID. Should someone snap a photograph of that customer's screen, this could then be scanned to make a fraudulent payment. The same issue could apply to QR codes.

However, if the code is based on EMVCo standards, it will have unique cryptograms in place to validate any transaction. This way, consumers can be confident that what they are presenting is better than a static card. In fact, contactless, QR codes and mobile payments are all largely similar in terms of security.

From a merchant's point of view, QR codes could represent more of a risk. As with any technology, as QR codes become more widely adopted, criminals will become more interested in finding ways of diverting funds into their own accounts. The only confirmation a consumer has that a payment has arrived at the proper destination is a merchant's notification that it has been received. If it has not, there is very little recourse. A root of trust is, therefore, critical for QR codes, especially for merchants. Providing this is as important now as it has been for any other payment technology.

As we move closer to a cashless society, we will look to adopt more convenient, secure alternatives. As the sheer scales of Alipay, WeChat Pay and Paytm demonstrate, there is certainly an appetite for QR codes and their simplicity. Standardisation and security are the final pieces of the puzzle; once these issues are addressed, we will see QR codes quickly become more widely adopted outside Asia. ■

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SHAPE THE FUTURE OF PRIVATE BANKING

Private Banking & Wealth Management: Switzerland 2018

12th December 2018 • Marriott, Zurich

Private Banking & Wealth Management: Switzerland 2018 Conference and Awards leverages the expertise across the Verdict research and publishing portfolio, including Private Banker International, Wealth Insight and Wealth Intelligence Centre. The event is an opportunity to share ideas, discover trends and network with peers across the wealth industry.

Key Issues :

- Economic trends to 2020. Wealth management industry performance
- With technology playing an increasingly significant role in service delivery what benefit does institutional size confer?
- What are the implications for service, delivery and product distribution in the age of the digital wealth manager?
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- How should Switzerland's private banking industry define itself in the age of digital technology and intensifying competition?
- What channels are working for attracting, retaining and managing an increasingly diverse customer universe?
- What's the connection between distribution and profitability? How are Swiss private banks adapting to the challenge of tight margins and higher costs?
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LEASING LIFE CONFERENCE & AWARDS 2018

15th November 2018 • Tallinn, Estonia

For its 14th edition **Leasing Life Conference and Awards 2018** moves to the Baltic Region to bring together asset finance professionals and industry disruptors in an active discussion of the key issues facing the leasing industry.

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- Harnessing the power of agile: Assessing the transformative potential of digital
- Embracing the circular value chain approach to lease delivery & design
- Taking the right risks for the rewards: Strategic implications of the era of asset ownership
- Using data and analytics to drive performance, deliver value



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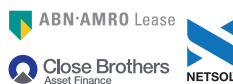
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