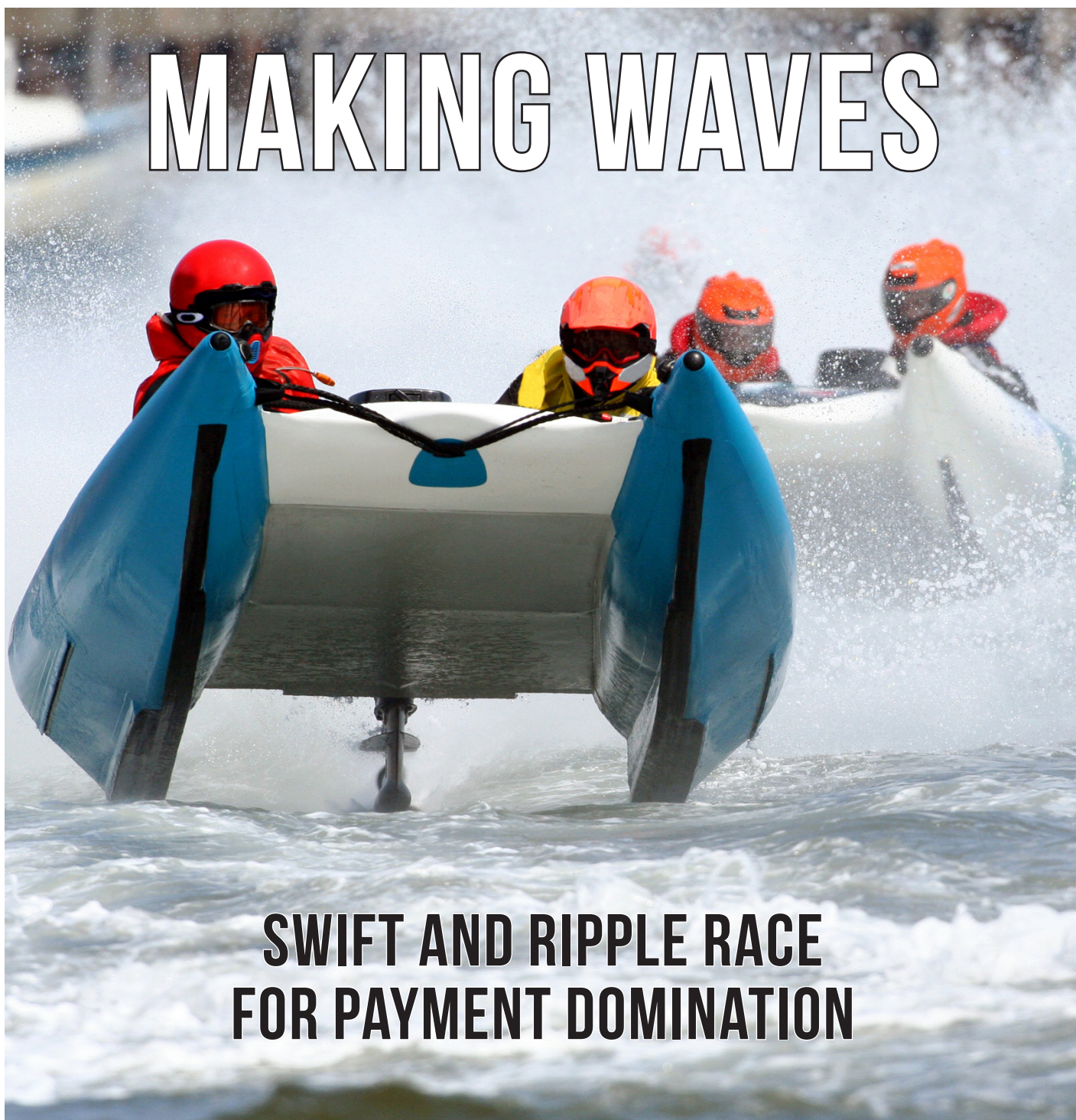


ELECTRONIC P A Y M E N T S I N T E R N A T I O N A L

MAKING WAVES



SWIFT AND RIPPLE RACE FOR PAYMENT DOMINATION

COUNTRY SURVEYS

A look at the payments environments in Hong Kong, Taiwan and Indonesia

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SIX Payment Services: Payment players need to become more agile

FEATURE

Canada's Interac Association enhances its digital payments platform

THIS MONTH



COVER STORY

PAYMENT CHALLENGERS

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**ELECTRONIC
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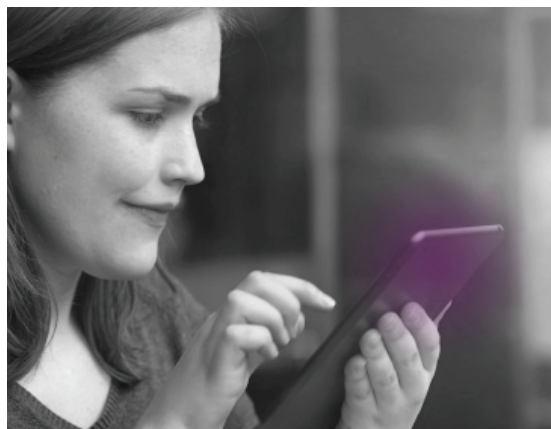
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PAYPAL, TRANSFERWISE, DOMINATE FINTECH MARKET SHARE GAINS



Douglas Blakey, Editor

Ogury's latest report, a study of mobile web and app engagement, is worth a glance to check out which banks and fintech challengers are taking market share.

For PayPal and TransferWise, the news is all positive. TransferWise registers in the top two in each European territory bar Italy, where it places third. This includes number one spots in the UK, France and Spain. In the UK, TransferWise has a market share of more than 36%, ahead of Worldremit with 28.2%.

The report examines the behaviour of over 1,265,000 mobile user profiles active during the three months from July to September, and covers six markets: the US, UK, Germany, France, Italy and Spain. In the UK, the most popular fintech for app ownership is PayPal with 31.2%, ahead of Android Pay with almost 25%.

To get a feel for the level of penetration of fintechs, Ogury examines the group of users who visited the homepages of major banks in each territory. It then analyses the percentage of this group also visit the homepages of fintech startups during the study period.

The same method was repeated with app downloads, logging the percentage of those who had downloaded an app from a major bank in their territory, and then also one from of its list of fintech startups

In terms of fintech adoption, the US leads the way with 12.4% of mobile users having downloaded at least one retail and one fintech app, ahead of Spain (10.4%) and the UK (8.8%).

In terms of users who have visited the homepages of banks and fintechs, the US is way ahead at 14.3%, in front of France at 5.1%; the UK is, again, third with 4.9%.

Among the established banks, the report examines bank app ownership in each market. In this category, Barclays ranks top in the UK with 25.7%, coming ahead of HSBC (18.9%) and Lloyds (17.6%).

The report highlights, in passing, the work Santander needs to do in terms of its mobile offering; it fails to rank in the top five in the UK, and in its domestic Spanish market – with a mere 12.7% – lags way behind digital leaders Caixabank (33.2%) and BBVA (24.5%).

In the US, Capital One ranks top (33.2%) ahead of Chase (29.4%) and Wells Fargo (28.4%). ■

LEADING FINTECHS FOR APP OWNERSHIP BY COUNTRY

US	Credit Karma 39.6%, Square Cash 18.3%, Samsung Pay 16.8%, Venmor 11.3%, Android Pay 10.1%
UK	PayPay 31.2%, Android Pay 24.9%, Trading 212 10.8%, Vanquis 4.8%, Samsung Pay 4.4%
Germany	Klama 39.1%, Trading 212 28.3%, BUX 10.1%, N26 7%, Fidor 2.2%
France	Boursorama 22.5%, Compte Nickel 20.6%, N26 11.7%, Carrefour Banque 9.9%, Revolut 7.1%
Italy	MySi Cartasi 18.4%, Circle Pay 17.3%, Satispay 12.6%, Trading 212 10.5%, CheBanca 6.9%
Spain	Verse 32.3%, Fintonic 14%, Trading 212 9.6%, Android Pay 8.5%, Twyp 6.6%

Source: Ogury

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

NEWS DIGEST

CHINA'S CENTRAL BANK TO CAP QR CODE PAYMENTS



The People's Bank of China, the country's central bank, is set to regulate payments made through scannable codes such as QR codes and barcodes, in a move to increase security and prevent fraud.

An initial cap of CNY500 (\$76) will be imposed on payments through standard QR codes. Additional daily limits of CNY1,000 or CNY5,000 apply to barcode payers who have not completed certain authentication procedures.

The central bank is reported to have issued guidelines for self-regulation by

institutions, and partnered with an industry group to study the QR codes of various businesses and develop measures to improve their security.

In addition, the bank is said to have called for encryption, tokenisation, risk monitoring, anti-counterfeit measures and security software for QR payments.

It has also asked banks and non-banking payment institutions to channel cross-bank transactions associated with barcodes through its clearing system or other legal clearing houses. ■

Funding Circle prepares £1bn flotation

The UK's largest peer-to-peer lender, Funding Circle, is preparing for a £1bn (\$1.35bn) listing on the London Stock Exchange.

Funding Circle is planning to meet with investment banks over the next few months to choose an adviser for the listing, which could take place as early as autumn. Reports state that the company could be worth £2bn.

Funding Circle has since lent more than £5bn since launching in 2010. In 2017 alone the business lent £1.7bn, and expanded into the US and Europe.

Funding Circle's revenues jumped 59% to £51m in 2016, but losses increased to £47.2m from £39.5m a year earlier. ■



MASTERCARD LAUNCHES KIONECT FOR NAIROBI KIOSK OWNERS

Mastercard has launched Kionect, a digital ordering system that will allow kiosk owners in Nairobi to order and pay for products from wholesalers via SMS.

Orders made by phone will help to create a digital record for kiosk owners, enabling them to access micro-loans.

Kionect technology provides a digital log of all transaction data, making micro-retailers eligible for loans from regional micro-finance provider Musoni, to purchase stock inventory. Kiosk owners will be able to borrow larger amounts with every loan that is paid back on time.

Kenya's nearly 100,000 kiosk owners tend to deal mainly in cash and have no financial records, excluding them from the traditional loans and lines of credit offered banks and financial institutions.

Kionect is one of several collaborations launched by Mastercard with public and private sector entities to develop electronic payment networks in Africa and other global locations.

Michael Elliott, vice-president at Mastercard Labs for Financial Inclusion in Nairobi, said: "Kiosk owners are the heartbeat of their communities – they source the supplies needed to get by.

"We have worked hand in hand with micro-merchants to truly understand their daily hurdles. Learning that product sourcing, tracking inventory and access to flexible, short-term credit are major pain points, we set out to develop Kionect. This Mastercard technology opens up a new avenue for micro-retailers to grow their business, increase consumer demand and ultimately contribute to economic development in Africa."

Juliet Ongwae, chief innovation officer at Musoni Kenya, added: "This product heavily relies on micro-entrepreneurs' transactional data for credit assessment, therefore making it accessible to micro-entrepreneurs who lack conventional collateral to secure their loans." ■

Swedbank selects MeaWallet to offer Baltic contactless card payments

Swedbank has agreed a deal with MeaWallet, a unit of Invuo Technologies, to offer contactless card payments for the Latvian, Lithuanian and Estonian markets.

The contract term is three years, and is valued at between €500,000 (\$601,000) and €600,000.

The host card emulation product with Mastercard MDES support will be offered as a managed service, combining MeaWallet's tokenisation platform and the bank's mobile app. Using the solution, Swedbank customers will be able to make digital contactless card

payments through the bank's current mobile banking app.

MeaWallet head Lars Sandtorv said: "The Baltic market is rapidly developing towards contactless payments; in fact there are several field tests and pilots in the three markets exploring different mobile payment technologies.

"MeaWallet has a proven technology, and we aim to deliver the solution in production to Swedbank in stages from the first quarter of 2018, hence delivering on our 'short time to market' promise." ■

CHINA UNIONPAY AND BANKS LAUNCH UNIFIED PAYMENTS APP



China UnionPay has joined with over 30 commercial banks and payments institutions to launch a new unified payments app for China's banking industry.

The new mobile QuickPass app aims to offer a seamless and easy mobile payments experience for consumers by integrating the mobile payment functions and services offered by various institutions.

Customers will be able to link bank cards to the app, manage different accounts, and benefit from the range of mobile payment services offered by each bank, including UnionPay QR code payments, comprehensive credit card services and P2P real-time transfers.

Commenting on the launch, Fan Yifei, deputy governor at the People's Bank

of China, said: "This jointly launched mobile payment app adopts unified portal standards in user identification and user experiences. It is a significant measure in enhancing financial innovation and promoting seamless retail payments for customers."

Fan added: "Entrepreneurs shall accurately identify people's needs, improve the service level in mobile payments and bring convenience to people's lives in a comprehensive way.

"While promoting further innovation on financial technologies, we must maintain a high level of payment security, giving priority to the customers' interests and safeguard the people's funds and personal information." ■

IZETTLE SECURES NEW €40M FUND TO ACCELERATE GROWTH



Jacob de Geer, iZettle

Swedish mobile payments fintech iZettle has raised another €40m (\$47m) to accelerate its growth strategy and product innovation.

The latest funding round is led by early backer venture capital firm Dawn and The Fourth Swedish National Pension Fund, and is supported by existing investors.

iZettle co-founder and CEO Jacob de Geer said: "iZettle is currently in an extensive expansion phase and has a unique position to make a difference for millions of small businesses. Through today's announcement we're able to allocate additional resources in order to accelerate our ambitious growth plan and product innovation.

"I'm proud to welcome such renowned, long-term investors to the iZettle family."

iZettle has expanded to 12 markets in Europe and Latin America since its formation in 2011.

Josh Bell, general partner at Dawn, commented: "iZettle gives small businesses the digital tools they need to gain the competitive edge against big corporations, which is crucial in today's technology-driven marketplace.

"The company is a true disruptor and we are delighted to be co-leading the round in one of Europe's signature fintech businesses, as it continues its expansion drive," Bell added. ■

Abra upgrade supports Ether, Bitcoin and over 50 fiat currencies



US Bitcoin startup Abra has upgraded its app to support investment in Ether, the digital currency that powers Ethereum, as well as Bitcoin and other fiat currencies.

Abra's app can now hold three wallets simultaneously, which the business claims is an industry first for a non-custodial digital currency wallet. The new release is

the first to utilise Abra's advanced multi-signature Bitcoin technology for holding digital assets in a single wallet.

The majority of Bitcoin wallets support only Bitcoin, with no support for fiat currencies, requiring users to hold multiple wallets, deal directly with exchanges, and manage multiple private keys and logins.

Abra founder Bill Barhydt said: "At Abra, we set out to make Bitcoin easy to use without sacrificing security or speed. You shouldn't have to sweat every time you buy, sell, or move Bitcoin between apps and services. Instead, we want you to spend your time learning, transacting and investing with confidence.

"With Abra you manage your Bitcoin, Ether and fiat currencies in one place. One app, with one recovery phrase – simple."

"Once you have added money to the Abra app, you can quickly and easily exchange it for any other supported currency in the app. No more worrying about copying and pasting addresses between apps, or accidentally moving money to the wrong place," Barhydt added.

"We believe this is the most convenient way to seize new cryptocurrency investment opportunities quickly, easily and securely – all in one place." ■

PNC GOES LIVE ON REAL-TIME PAYMENTS WITH FINASTRA

PNC, a top-10 US bank by assets, has gone live on real-time payments, The Clearing House's new US real-time payments network.

PNC can now offer clients the ability to send and receive real-time payment transactions using Finastra's payment services hub, enabling clients to make near-instant payments across a secure network.

The Fusion Payments service is already being used by PNC to provide wire payment processing.

Simon Paris, deputy CEO at Finastra, said: "PNC has positioned itself at the forefront of US real-time payments as an early adopter, enabling its clients to enjoy the benefits of real-time payments immediately with the launch of RTP.

"We're helping banks like PNC make real-time payments a reality so that they and their clients can more effortlessly embrace the digital future."

Erika Baumann, senior wholesale banking analyst at Aite Group, added: "In the United States, real-time payments are being driven by market forces and user demand for real-time services.

"Early adopters like PNC are leading the way in bringing the benefits of real-time payments to their business and consumer customers. Payment vendors such as Finastra have considerable experience in implementing real-time payments solutions and can be great resources for banks that seek to become early adopters of real-time payments capabilities." ■

SUNTRUST JOINS ZELLE

SunTrust has officially launched Zelle, to give the bank's consumer online and mobile banking clients access to a new payments network.

SunTrust is replacing its Popmoney services with Zelle in a bid to enhance the consumer experience by offering fast payment capabilities and new services, such as the ability to split payments.

SunTrust clients can now exchange money in minutes, when both parties are enrolled, with consumers who bank at financial institutions in the Zelle network. Funds can be sent using just a recipient's email address or US mobile phone number, and are made available directly in consumers' bank accounts.

Anil Cheriyan, chief information officer at SunTrust Bank, said: "SunTrust is proud to be an early adopter of Zelle and pleased that our clients can now look to us, their trusted bank, for convenient and secure payments, whether they want to split the check at a restaurant, pay the babysitter or send monetary holiday gifts, typically in minutes when both parties are enrolled.

"SunTrust is committed to helping our clients gain financial confidence, and moving funds efficiently and effectively helps support that objective."

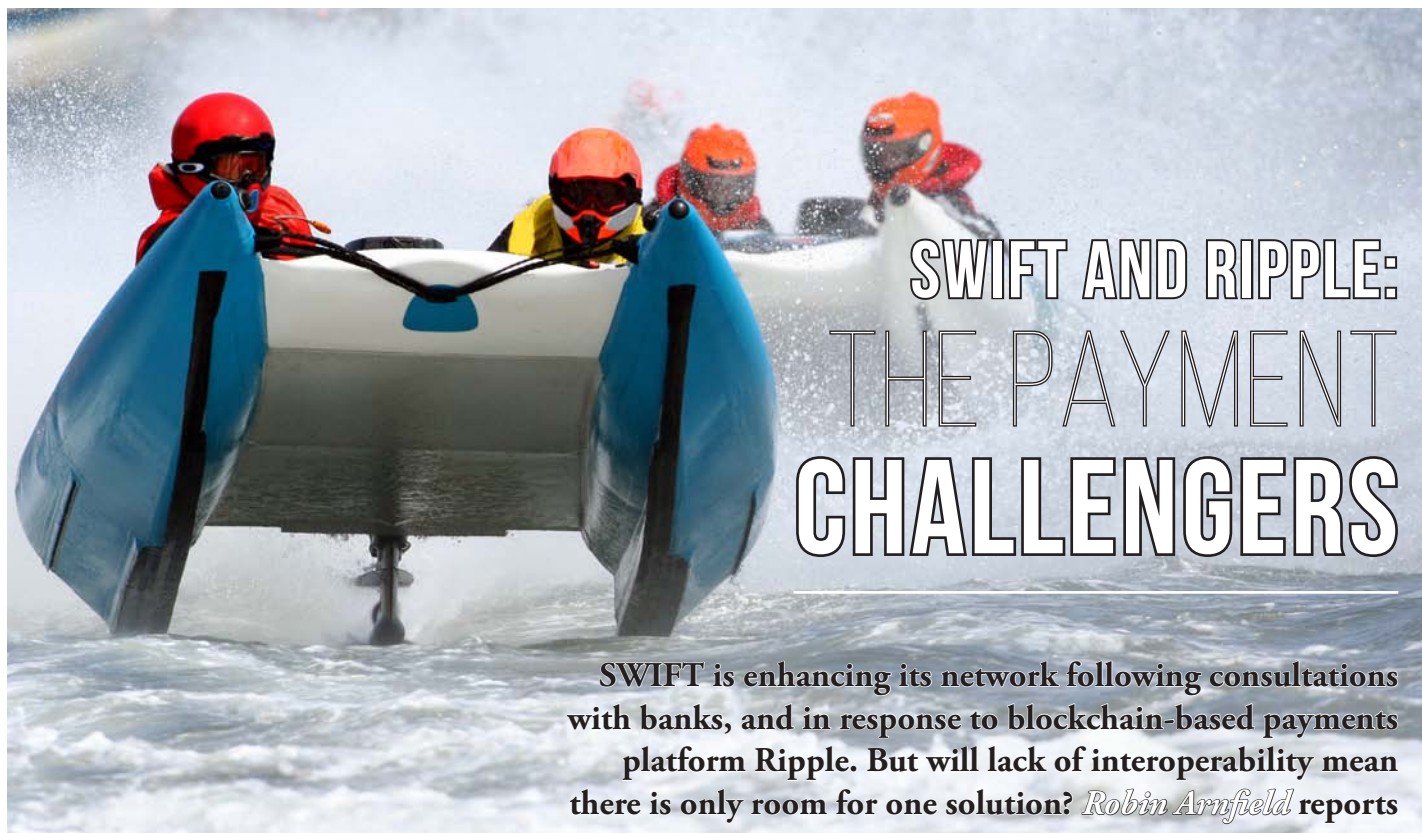
SunTrust clients can access Zelle on the SunTrust Online Banking and the SunTrust Mobile App without paying any fees. ■

Kroger agrees deal with Chase Pay

US retailer Kroger has signed an agreement to offer JPMorgan Chase's mobile wallet, Chase Pay, as a payment option to its customers.

Kroger said the move is part of its Restock Kroger plan, which aims to make partnerships that will expand customer value. The alliance will enable the bank's 65 million customers to use the Chase Pay mobile wallet for online and in-store purchases at Kroger. The service will be rolled out in select retail markets and e-commerce programmes in 2018.

Kroger CIO Chris Hjelm commented: "Mobile wallets enable a more seamless shopping experience for our customers, and at the same time can help us drive cost out of our business." ■



SWIFT AND RIPPLE: THE PAYMENT CHALLENGERS

SWIFT is enhancing its network following consultations with banks, and in response to blockchain-based payments platform Ripple. But will lack of interoperability mean there is only room for one solution? *Robin Arryfield* reports

Elizabeth McQuerry, who heads Glenbrook Partner's Global Payments Practice, says: "Two very different [cross-border payment] models are growing into viable, global options characterised by a lack of interoperability."

SWIFT gpi (global payments innovation) is taking shape as the next generation of traditional correspondent banking, implementing enhancements to make the sector more competitive through payment tracking, greater transparency, and same-day value delivery within the network of users.

"RippleNet, a distributed ledger network for the exchange of cross-border payments, is beginning to gain traction as the alternative to the traditional model," McQuerry says.

RIPPLE

RippleNet is an inter-bank platform that uses bi-directional messaging for communications between participating banks, which currently number 100 financial institutions (FIs) including Santander and SEB.

In November 2017, American Express joined RippleNet, working with Santander as its partner to enable B2B transfers to Santander UK bank accounts.

In addition to RippleNet, Ripple offers the XRP digital currency, which it defines as a native digital asset not tied to the value of any fiat currency.

COMMON GOAL

"Ripple and SWIFT share a common goal: helping banks move money/value/payments around the world," a Ripple spokesperson says.

"However, while SWIFT depends on a correspondent banking system to process payments, Ripple is enabling frictionless, instant payments today using its enterprise blockchain technology and the XRP digital asset."

"Ripple's solution includes two-way messaging, instant settlement, and end-to-end visibility over the journey and fees of the payment. In addition, Ripple has a unique product suite, including xRapid, which helps RippleNet members source on-demand liquidity for cross-border payments using XRP," the spokesperson adds.



**RIPPLENET IS
BEGINNING TO GAIN
TRACTION AS THE
ALTERNATIVE TO THE
TRADITIONAL MODEL**

Ripple says it is compatible with all emerging standards, and is the only simple, lightweight protocol for payments that can be used by banks, payment providers and other FIs.

"Ripple-enabled payments are settled in a matter of seconds, and fees are around \$0.0004 per transaction. The solution allows banks to exchange information in advance, including associated costs related to transaction fees and/or foreign-exchange rates, as well as the expected date of delivery for the funds," the Ripple spokesperson says.

Unlike the legacy SWIFT system, if any information is incorrect or missing – causing a payment to fail – both banks are notified immediately.

"This prevents payments from getting 'stuck' or becoming lost. Once the sending bank has initiated a transaction, Ripple uses Interledger Protocol (ILP) to settle the funds and notify everyone of its successful settlement."

Indicative of the challenge Ripple poses to SWIFT, Ripple held a parallel event to coincide with SWIFT's Sibos conference in Toronto in October 2017.

RESPONSES

In reply to Ripple's claims that SWIFT's correspondent banking model is not as efficient as RippleNet, a source close to SWIFT says: "SWIFT's correspondent



banking model is used by thousands of institutions globally.

“SWIFT is community-driven, and is responding to changing market requirements with the launch of gpi and other services. The reality is that many FIs, particularly those in less-developed or less-regulated regions, rely heavily on SWIFT’s services. While different models offer choice, that is unlikely to change anytime soon.”

In response to Ripple’s claim that Ripple offers instant settlement whereas SWIFT payments can be expensive and slow, the SWIFT source says: “There’s definitely room for improvement in the payment process for all infrastructure providers. Speed of settlement is important, but for many corporate treasurers, end-to-end real-time tracking of payments is the number one priority over speed.”

Commenting on Ripple versus SWIFT, Sean Rodriguez, executive VP at the Federal Reserve Bank of Chicago, says: “The Fed has chosen not to endorse any particular platform, system or technology.”

“My own personal feeling is that the more competition there is in domestic and cross-border payments, the better for the market and for businesses and consumers everywhere. I expect the best technologies will thrive in the new, improved payments environment.”

SWIFT GPI

“Eighteen months ago, SWIFT gathered a group of global transaction banks to look at the pain points associated with the correspondent banking process,” Harry Newman, SWIFT’s head of banking, says.

“Although correspondent banking has been around a long time, the version of correspondent banking used today is a child of the 1980s – it did a good job, but it has its issues.

“The current approach isn’t transparent, and no one knows how long payments take. From the end-user viewpoint, you don’t see what happens to your payment. But the bank-to-bank experience for an international payment

doesn’t matter as much as the end-user experience.

“With new technology, new expectations, and the digital age, this isn’t acceptable, so we set out to address these issues, and worked with the banks to co-create SWIFT gpi.”

Newman says 25 banks are now using SWIFT gpi, and 40 are expected to be live by the end of 2017. In addition, around 80 banks are in the implementation phase for gpi.

Over the next two to three years, SWIFT plans to progressively offer gpi to the whole SWIFT community.

CURRENT RAILS

“Re-engineering all the current rails that carry the world’s trade payments from scratch is a multi-year job,” says Newman.

“But these existing rails work, so we used them to put in place the gpi service. Our view is that the underlying rails aren’t broken, so there’s no need to re-engineer the foundation when we can instead apply new technology to address the underlying issues.”

New technology offered in SWIFT gpi includes a cloud-based tracker service that uses APIs to monitor the process of all payments. “Now corporates can track their payments in real-time and get confirmation of that credit directly from their banks,” says Newman.

“SWIFT gpi also has a strong service level between the banks involved, so that not only are gpi payments tracked and monitored, but they move faster as they have to be processed within a certain timeframe.”

Newman adds: “Since gpi went live earlier in 2017, several million gpi payments have crossed over 100 country corridors. We’re seeing banks such as Citi use APIs to embed gpi Tracker information into their corporate payment platforms, allowing their customers to track gpi payments in real time. The industry feedback about gpi is very positive.”

With gpi, payments are credited within 24 hours from initiation – and most within a few hours or even minutes.

“This is an important distinction,” notes Newman. “People say correspondent banking

is slow, but what we’re seeing is that gpi is fast. Tech vendors talk about speed, but they mean bank-to-bank transaction speed. What matters is when people actually get paid, which is a core focus of SWIFT gpi.”

DISTRIBUTED LEDGER

“We’re interested in distributed ledger technology [DLT], and are currently in the exploratory stage with several proofs of concept, including the use of DLT for Nostro/Vostro account reconciliation,” says Newman.

SWIFT is working with 33 banks which are gpi users, on its Nostro/Vostro account DLT project. “Vostro and Nostro accounts are distributed so they lend themselves to DLT,” Newman says.

In an October 2017 statement, SWIFT said: “The PoC’s preliminary results show that the SWIFT-developed DLT application can deliver the business functionalities and data richness required to support real-time liquidity monitoring and reconciliation.

“DLT provides real-time visibility to both the account owner and its servicer on the available and forecasted liquidity on the Nostro account, and supports payment reconciliation and investigations by providing an enriched data model based on ISO 20022.”

“It’s not all about DLT, as technologies such as the cloud and APIs have roles to play,” says Newman. “We use the cloud for the gpi tracking service and the banks use our APIs to integrate the status of payments, the information about the end-to-end payment flow, and the final confirmation into their offerings to their clients. Some of the major banks such as Citi have already started to do this. From our viewpoint, DLT is a technology, so, if it works, we will use it.

“There’s no sense in taking a perfectly good centralised ledger and making it distributed if it works well on a centralised basis. But some important processes like accounts are naturally distributed and need to be reconciled, so it makes sense to put these distributed accounts onto a blockchain.”

INNOVATION

“gpi doesn’t use non-central-bank cryptocurrencies, but uses fiat currencies that banks hold with each other – that is the underlying money mechanism that banks use for corporate and for retail payments,” Newman explains.

“The innovation with gpi is in its cloud-based service that gives complete transparency

and end-to-end tracking, combined with the speed and predictability that clients want. We think that the transparency on fees, charges and payments status offered by SWIFT gpi is a major part of today's compliance requirements.

"We're collaborating with fintechs that specialise in DLT. We know we can't do everything and can't imagine all the possible use cases for DLT."

Newman says SWIFT gpi is a flexible platform with the potential for fintech providers to offer additional services that sit on top of gpi.

"We allow others to come into our ecosystem with APIs to provide innovative services, and this could include DLT," he says. "The technology is secondary to the business problem we are trying to fix."

R3

US-based R3 – which has over 100 members, including commercial and central banks, other financial institutions, regulators and trade associations – has developed the Corda financial services distributed ledger platform.

R3 has over 60 partners, including consultancies, systems integrators and software vendors building apps on top of Corda.

"Several companies are looking to DLT to disrupt and destroy the current model of financial services.

"Bitcoin was invented to turn the banking system on its head and make commercial and central banks irrelevant by using peer-to-peer networks to obviate the need for banks – we aren't doing that. We're working with partners like the DTCC [Depository Trust & Clearing Corp.], Accenture, Calypso and our bank members to build a set of software solutions that works within that banking system rather than tear it down."

CORDA

R3's Corda blockchain framework uses either cryptocurrencies or fiat currencies.

"We don't have a native cryptocurrency," Cooper says. "We're working with several central banks around the world to determine the best way to represent fiat currencies on a distributed ledger.

"We built Corda with a smart contract methodology that lets us code business logic and business transactions. We think that using Corda to transfer fiat currency issued by nation states is the best approach, which is one of the reasons we're working so extensively with central banks and regulators.

production on Wall Street. For example, LenderComm, a syndicated loans application built with Finastra, will be live, and we're working with TradeIX and Accenture in the trade finance space."

Corporations can use Corda as well as commercial banks. "We built Corda with our bank partners and had a set of product requirements built into the platform," Cooper continues.

"As banking is so complex and regulated, we built a robust platform that is fit for purpose much more broadly across commerce – a corporate treasurer or the financing arm of a car manufacturer could be using Corda just like banks, asset managers or insurance firms use Corda. We think that DLT/blockchain has power to transform commerce broadly just as the Internet did for media and entertainment.

"We're at the point now where global regulators and central banks are experimenting and looking to build applications with DLT. If governments are involved, there will be a lot of momentum behind DLT."

IBM

"Traditionally, cross-border payments involve vast ecosystems of intermediary parties between sending and receiving FIs to initiate, clear, and settle transactions involving different currencies," says Jesse Lund, IBM's VP, global Blockchain market development.

"The process can take days, and is subject to errors and high fees from manual processing and reconciliation.

"Blockchain technology and the digital currencies that it supports enable direct payment flow between two counterparties in any currency participating in the network, while maintaining security and regulatory compliance with data privacy and governance standards."

"IBM is working with KlickEx and the Stellar Foundation to deploy a production cross-border blockchain payment solution, allowing real-time clearing and settlement on a single network. Built on the IBM Blockchain platform leveraging Hyperledger Fabric and Stellar, the payments solution is already enabling more efficient and inexpensive cross-border transaction settlement across 12 currency corridors," Lund explains.

"The system is initially reliant on the crypto-asset Lumens [XLM] for settlement, but IBM is pursuing alternative settlement assets including central bank-issued digital currencies and tokenised commodities such as gold and other precious metals." ■

“ SWIFT GPI IS A FLEXIBLE PLATFORM WITH THE POTENTIAL FOR FINTECH PROVIDERS TO OFFER ADDITIONAL SERVICES THAT SIT ON TOP OF GPI

R3 has offices in nine countries, and so far has raised \$107m. The company, whose backers comprise 43 banks plus Intel, is raising additional funds from its investors.

"We started R3 in September 2015 with the goal not of disrupting the banking industry but of building a set of DLTs to empower our bank members to do their jobs more efficiently," says Charley Cooper, R3's MD and head of external affairs.

"Our Corda platform isn't a disruptive technology but a means of empowering the next generation of banking and broader business services.

"SWIFT is a critical component in the infrastructure underpinning financial markets. We're in exploratory discussions with SWIFT about how DLT could be deployed to improve efficiencies for market participants.

"Corda is built flexibly so that, if the time comes in the future when cryptocurrencies do catch on in mainstream banking, our platform can handle this," Cooper continues.

"One of our partners is the Bank of Canada, which is working with us, Payments Canada, which operates Canada's core payment systems, and the largest Canadian banks on Project Jasper.

"This initiative began in summer 2016 and is now moving into its third phase. For Project Jasper, we created CAD-coin, an instance of the Canadian dollar, with Payments Canada, the Bank of Canada and the Canadian banks for the purpose of testing the issuance of digital Canadian dollars and using them for payments.

"In the first half of 2018, several of our projects will go into live commercial

PAYMENTS: HIP TO BE SQUARE



Founded in 2009 by Twitter CEO Jack Dorsey and Jim McKelvey, Square has made leaps and bounds in the US payments sector. It hit the UK last year, but with so many options out there, is it too late? *Patrick Brusnaban* writes

Square has been bringing its products to the UK since March 2017. According to Square UK lead Sarah Harvey, the proposition is “enabling anyone to take card payments”.

Square readers, which come in portable and heavier tabletop forms, can accept contactless payments, chip-and-PIN, and even swipe payments. So far, so standard.

However, other additions help Square stand out. This is crucial considering the amount of options available to small-to-medium sized businesses.

Speaking to *EPI*, Harvey explains: “The interesting thing about Square overall is that we are relatively unique because we have the software, the hardware, and we do the payment processing. Usually when you’re a small business, you have to piece all of this together.

“If you’re a bicycle repair shop down the road, you’re not going to spend a lot on a bespoke system. Square allows you to have a relatively inexpensive bit of hardware that pairs up with the technology you have anyway.”

However, other options that have had more time in the UK, such as iZettle, are still in play. What will make people turn to Square?

“One of the major differences is the aesthetics of how it looks in the store. It’s sleek and fitting and it has definitely been a crowd pleaser for some,” Harvey says.

“The second difference is that this is very specific to how small businesses operate. We get cash to people faster than anyone else.

“We’re able to settle usually next business day – around 98.7% of our transactions settle on the next business day. That’s the fastest of anyone. That really matters as a lot of these

businesses are used to having cash in hand, and a lot of businesses require cash to hand.”

Contactless has been a triumph in the UK. According to the UK Cards Association, one in every four purchases in the UK is through contactless cards. This is a trend it expects to continue, and is one of many trends that have helped Square.

Harvey says: “It’s been going very well and we’re happy with the growth we’ve seen. One of the things that is really interesting for Square in [the UK] is how popular contactless is. A lot of that has grown just from the transport system here and everyone tapping with Oyster cards.

“A couple of other trends are powering us here – one of them is omnichannel. What we’re seeing now is pure offline businesses dabbling in online and vice versa. They need something that works for both online and offline segments.

“With an omnichannel experience and the Internet of Things, Square can let merchants interact with their customers more.

“One of the things that people quite like is the email and text receipts that we offer,” Harvey explains. “There’s an option when receiving it to give a rating about the service they received.

“One of the things that we’ve found, particularly in the US, is the Yelp problem. A lot of people go onto it and rate small businesses, sometimes poorly. With this immediate connection via the receipt, merchants are able to immediately communicate, and it is a nice way to engage before a terrible review gets out there. That’s one of the biggest drivers for us as it gives a way to check back in.”

Square is on the rise, with some ambitious plans. In September 2017, Dorsey announced that the firm would apply for a banking licence in the US.

Confirmed by Square Capital chair Jacqueline Rees, who will also chair the new bank, Square will apply for an industrial loan company charter. An industrial loan company, unlike a bank, is able to offer non-financial services. This includes Square’s food delivery service Caviar and the sale of its signature dongles.

The move will be capitalised with \$56m in cash and its acting CEO will be Lewis Goodwin, who recently joined Square from Green Dot Bank.

But while things are becoming more active in the US, what is Square’s aim in the UK? Harvey concludes: “In the UK, there are 5.4 million small business, and three million of them don’t take cards. They should all take card payments.

“Our ultimate goal is to move all small businesses into taking cards. Without that, these small businesses will end up failing. One in six Brits does not carry cash any more. So we’re trying to bring all of these people into the ecosystem.” ■

CASE STUDY

Glenn Hunter runs his own business, Hunter Home Ventilation in Lisburn, Northern Ireland. He has been running the business since 2007, and has noticed a shift in behaviour away from customers paying with cash and cheque, to now wanting to pay with card. That prompted Hunter to sign up for Square.

He says: “I’m a one-man band and need to make sure that I get paid for the work I do, promptly, and in full. Most of my transactions are over £100 – in the past people may have

had that amount of cash in the house, but these days that’s just not the case. It got to the stage where I had to chase people up for payment after I’d finished a job, and it affected my cash flow.

“Using Square to take card payments has really helped me out. Now I can take payment straight away when I finish a job, and I don’t have to spend my evenings chasing people up, which – speaking frankly – is embarrassing for everyone, and is also a bad use of my time.” ■

VOCALINK REPORT: EMPOWERMENT THROUGH PAYMENT

There are more ways to pay than ever – cash, cards, mobile and all the variations of the above. So why do people tend to stick to an old favourite, and are they even aware of the options available to them? *Patrick Brusnahan* reports

What every consumer appreciates is convenience. As Vocalink CEO Paul

Stoddart, states: “The most valued aspect of any payment method – card, e-wallet, cash – is convenience. They like and value the growing choice they have, but fundamentally it is dependent on what method offers them the most convenience.”

Vocalink’s *The State of Pay* report focuses on this aspect of the payments sphere. The main takeaway is that there is still work to be done.

According to the report, 50% of people tried to pay with a smartphone, up from 31% in 2015. However, 20% have tried mobile payments and have not used them since. This is perhaps down to the fact that it takes effort for people to change their habits – 49% of respondents said ‘it takes a lot to make me change how I pay for things’.

Speaking to *EPI*, Mark Collieran, senior customer research and insight manager at Vocalink, explains: “From our workshops, the feedback we got is that many current payment types already work and fit the needs of consumers, i.e. the speed and convenience of contactless or the control cash offers. New payment methods need to showcase further benefits, such as added security or an even more seamless experience, in order to change their payment behaviour.

“Currently, many new payment types, start as either a ‘Plan B’ or are used in one specific use case, i.e. ‘I’ve forgotten my wallet, therefore I’ll use my phone’ or ‘I was out on a run and needed a drink, so used my smartwatch to pay’. It is these repeated experiences that will start to change the way in which consumers choose to pay as they get more familiar with these new methods.

“Further education from payment providers and banks can aid this process as consumers trust these bodies to provide them with recommendations – we found 70% of UK consumers trust their bank to recommend payment products and services.”

APPS

Faring better in 2017 are mobile banking apps – 52% of consumers now use them, compared to 38% in 2015.

The most common use case is balance enquiry, utilised by 35% of consumers, followed by money transfers between accounts or to other people, at 33% and 32% respectively.

One in three consumers now use mobile banking to make and receive payments. This

has seen a sharp rise in usage, especially in bill payments. Only 3% used mobile banking to pay bills in 2015, but 23% now do so regularly.

Collieran says: “Convenience has played a huge part in the increase in banking app usage but that isn’t the full story. From the *State of Pay* workshops and the quantitative data, we have seen that the mobile banking app can be the bedrock of the way people manage their finances.

“The banking app was a natural extension of online banking, with which people were/ have been familiar for some time, and banks have made a conscious effort to encourage the use of banking apps across their channels, educating their customers in the process.

“Finally, even the way the majority of mobile banking apps are now accessed through biometrics make them easier to access, and may have addressed previous security concerns.”

Biometrics are now well in the mainstream. With many smartphones utilising biometrics, the hardware is no longer a piece of super-expensive futuristic kit: everyone has one in their pocket.

While fingerprint is the main form of biometrics utilised at the moment, Collieran thinks this situation will change.

“As with fingerprint identity, when other forms of biometrics become available to consumers, either via mobile phones or at a point of sale, this will become the new normal,” he adds.

“We feel that facial and voice recognition will be next, following the popularity of digital assistants and the latest mobile phone updates. With one in four saying that eye scanning would be the most secure to access mobile banking, we can see the appetite is there for further developments in biometrics that perhaps wasn’t there in 2015.”

This should aid consumers’ main concern with alternate payments; security. Collieran concludes: “Security can be a pain point for some, for example 45% of those who don’t make mobile payments say ‘it doesn’t feel secure’.

“For others, there are more emotional obstacles to overcome – one in three said they would avoid using payments technology as ‘I would be embarrassed to get it wrong at point of sale’.

“Lastly, over half agreed that they don’t make payments using their phone as they are concerned that ‘it wouldn’t work at the moment of truth’. This emotional obstacle seems to be most prevalent in the UK.” ■

KEY STATISTICS

- 67% agree that they like to be able to see, up to the minute, where their money is going
- 52% of mobile payments users now pay friends and family via this method
- 70% of UK consumers trust the bank to recommend products
- 47% find the delay it takes for some payments to show up in their bank accounts frustrating
- 61% of parents choose to pay pocket money via cash
- 26% agree that eye scanning is the most secure way to access mobile banking

SEASONAL SPENDING: CHRISTMAS IS NOT A HOLIDAY

The year's end brings a lot of big spending days: Black Friday, Cyber Monday and the whole Christmas shopping period. However, some consumers find all this exhausting, and actually spend less. *Patrick Brusnahan* writes

Christmas shopping can be stressful. According to research from Klarna, the average Brit spends 7.2 hours Christmas shopping, visiting seven online retailers in the process.

In addition, one-third of Brits are exhausted by Boxing Day.

In-store crowds are the biggest source of stress according to around a quarter of shoppers. This suggests that improved POS is much needed at retail outlets to get people in and out easily. Twenty percent of respondents stated that finding the perfect gift was also causing an ordeal.

Luke Griffiths, UK general manager at Klarna, comments: "This research shows that the online customer journey at Christmas is fraught and can be easily fractured by a stressful moment.

"Retailers must be aware of this and invest in their user experience to deliver a smooth customer journey – from the first moment a customer spots your product to when it is sitting under the Christmas tree.

"Payments are often forgotten in the festive rush towards marketing and discounting. We want to help retailers offer their customers a smooth festive season with our payment solutions, including Pay later and Slice it. Being aware of stress levels and worries about gift buying helps retailers win over customers that are unsure about a gift or struggling with finances, to spread the cost."

Shopping fatigue is also affecting the usually prosperous Cyber Monday. According to Ingenico, with Black Friday looking more like a week-long event rather than just a day, online sales on Cyber Monday are struggling.

Online sales peaked on Black Friday this

year, where consumers spent a huge 515% more online than the average Friday in 2017. This was nearly double the expenditure on Cyber Monday. This is a great dip for Cyber Monday, as in 2016 its transaction value was only 26% below Black Friday's.

"With retailers competing to launch their discount campaigns first, and consumers rushing to snap up the best deals, Black Friday has now extended into a full week-long event," says Gabriel de Montessus, VP – retail global product and marketing for Ingenico Group. "Cyber Monday was still one of the biggest e-commerce days of the year, but sales fatigue appears to have hit consumers who, this year, expended more energy and budget on earlier discount offers."

BLACK FRIDAY FEVER

"Black Friday fever gripped the continent once again this year," notes de Montessus.

"In 2018, retailers have a clear opportunity to expand their festive campaigns across Europe, providing they have the right payments infrastructure in place. Payment preferences vary hugely across the continent, and retailers should ensure they put customers at ease by localising to reflect languages and shopping cultures."

While Black Friday is the day after Thanksgiving, a North American holiday, the whole world spends the day looking for deals and savings. While newspapers and media outlets cover stampedes for discounts at retail stores, Black Friday spend is increasingly being focused on e-commerce.

GlobalData expects the Black Friday online spend to be three times more than an average

day of the year. It also expects that more than half of online purchases on the day will be carried out by card, with alternative payment tools capturing less than a third of total sales.

PayPal could gather almost one fifth of online payment transactions, but Apple Pay will only get a mere 2% of sales.

Shivani Gupta, payments analyst at GlobalData, comments: "UK consumers' preference for card payments to make online purchases could see transactions worth almost £742m (\$1bn) being made using payment cards in a single day."

Payments business Ingenico predicts that Black Friday spending in the EU will exceed that of the US. Based on Ingenico's data from 2016, spending uplift in the region is expected to be in excess of 450% above an average Friday, nearly three times the 162% spend increase in the US, and higher than the UK's 318%.

Oscar Nieboer, chief marketing officer at Paysafe, says: "While Black Friday was traditionally an in-store event, technology has changed the way we shop and more and more retailers are now using e-commerce to launch their sales campaigns before they feature in their physical stores. This has the benefit of attracting a far wider audience.

"The expansion of e-commerce coupled with ever-growing smartphone usage has enabled the rise of 'dual-browsing', with 41% of Brits now buying an item on a mobile phone while in-store.

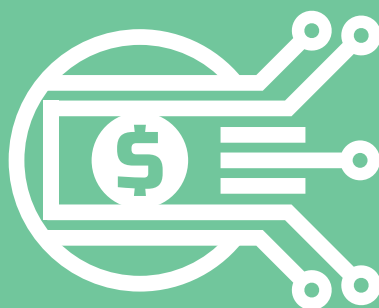
"The rise of dual-browsing means perfecting the omnichannel experience is now more important than ever – retailers must make sure both the online and offline experiences are positive and hassle-free. For example, online and offline deals need to have the same terms and conditions as a minimum.

"The evolution of cash has led to more consumers adopting mobile wallets (24%) and cryptocurrencies (12%) for payments. While debit and credit cards remain king for consumers when making in-store purchases (51%), it is important for retailers to recognise the rise of alternative payment methods – both online and offline."

"Businesses need to wise up," Nieboer continues. "Particularly during big retail events such as Black Friday and Cyber Monday, the likelihood is that consumers are browsing on various sites for the best deals on the items they are looking to buy.

"With so many options available, coupled with the consumer's time-bound mindset, it's crucial for businesses to offer the right payments options." ■

CANADA'S INTERAC: ENHANCING THE DIGITAL PAYMENTS PLATFORM



Interac Association is doing its bit to speed up P2P, B2C and B2B payments in Canada by enhancing its digital payments platforms.

Robin Arnfield talks to Debbie Gamble, the Canadian debit scheme's VP of product and platform development

Interac's core service is its shared ATM and POS debit card networks.

It also offers the Interac Online service offering e-commerce payments directly from bank accounts, Interac e-Transfer enabling real-time fund transfers from one bank account to another, and POS access for Canadian debit cardholders at nearly two million US retailers.

To use Interac e-Transfer, senders just need their recipient's email address or cellphone number, with the funds travelling via the Canadian banking system.

In 2016, Interac handled 5.4 billion Interac debit transactions worth C\$222bn (\$175bn) and 190 million Interac Cash transaction volumes.

"The first version of Interac e-Transfer was launched in 2002, and the service now connects over 250 Canadian FIs," Gamble tells *EPI*. "It allows customers to move money from any Canadian financial institution (FI) to any other Canadian FI. The money is transferred as irrevocable good funds in real time.

"Over the last few years, especially with the growth of mobile, Interac e-Transfer has really been the backbone of how Canadians exchange funds with each other, and we've seen incredible growth."

CHEAP TRANSFERS

For P2P or SME bank-to-bank transfers, Interac e-Transfer is the easiest and cheapest mechanism for transferring funds between FIs, Gamble points out. With the widening acceptance by FIs of Interac e-Transfer, the service is increasingly offered free of charge to users.

"FIs would offer Interac e-Transfer for free to their customers as it's now such a core service within their online banking feature set," says Gamble. "Largely because of mobile transfers, we're seeing 50% growth year on year in Interac e-Transfer, and are on track to process C\$90bn in funds transfers this year. Over 70% of Interac e-Transfer notifications are now received via mobile devices."

INTERAC GROWTH (2012-2016)

INTERAC DEBIT TRANSACTIONS, MERCHANTS, DOLLAR VALUE AND USERS PER YEAR

	ACTIVE DEBIT CARDS	DEBIT TERMINALS	MERCHANTS	APPROVED TRANSACTIONS	TOTAL TRANSACTION VALUE
2012	23.6 million	794,000	472,000	4.36 billion	C\$190bn
2013	23.9 million	829,000	481,000	4.67 billion	C\$203bn
2014	24.5 million	879,000	504,000	4.90 billion	C\$211bn
2015	24.8 million	1,355,000	409,000	5.17 billion	C\$217bn
2016	28.7 million	1,400,000	439,000	5.43 billion	C\$222bn

Source: Interac

“ WE HAVE AN INCREDIBLE CONTACTLESS ACCEPTANCE FOOTPRINT IN CANADA



Debbie Gamble, Interac Association

Between 1 January and 31 October 2017, there were 192 million Interac e-Transfer transactions, up from 163 million sent in all of 2016. Interac forecasts over 235 million Interac e-Transfer transactions in 2017. In the first 10 months of 2017, the total dollar value of Interac e-Transfer transactions was C\$74.5bn, up from C\$63bn in 2016.

NEW FEATURES

Over the last year, Interac has introduced several enhancements to Interac e-Transfer, such as Interac Bulk Disbursement, which offers businesses the ability to make bulk payments or process payroll via Interac e-Transfer. The original restrictions on the total amounts that could be sent each day via Interac e-Transfer have also been eased to make life easier for SMEs.

Interac is involved in Payments Canada's Faster Payments initiative to speed up the core payments clearing and settlement systems that the payments body operates. "The enhancements we're making to Interac e-Transfer are intended to help support Payments Canada's vision of modernising the Canadian payments ecosystem," says Gamble.

Interac has made it easier to send and receive payments via Interac e-Transfer. For security purposes, Interac e-Transfer senders have been required to communicate a security Q&A with recipients. However, following market research, Interac has introduced an Autodeposit feature allowing recipients to have funds sent via Interac e-Transfer automatically deposited directly into their bank account, without having to answer a security question. Also, senders do not need to convey security answers to recipients.

Another new feature is Request Money, which makes it easier for funds transfer recipients to request money they are owed. When they are sent a request for money, the payor is notified instantly and can click on the link within the notification to accept the request and

log into their bank account. If accepted, the requested amount is automatically deposited into the recipient's bank account.

"SMEs can include their invoice number in their Request Money notification," says Gamble. "We'll add some new features in 2018 to enhance Interac e-Transfer for the business market."

So far only a limited number of Canadian FIs such as RBC, Scotiabank and TD offer Autodeposit and Request Money, but more FIs are expected to come on stream with the new services in the next few months.

INTERNATIONAL

Interac e-Transfer can be used to send money outside Canada via Western Union, while MoneyGram uses Interac e-Transfer Bulk Disbursement to distribute funds to people in Canada.

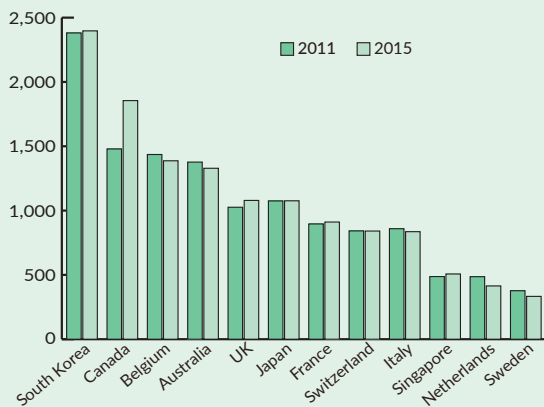
CARD FRAUD LOSSES: RECORD LOW IN 2016

	INTERAC DEBIT CARD FRAUD	CARDHOLDERS REIMBURSED
2008	C\$104.5m	148,000
2009	C\$142.3m	238,000
2010	C\$119.0m	205,220
2011	C\$70.0m	154,170
2012	C\$38.5m	93,800
2013	C\$29.5m	72,220
2014	C\$16.2m	32,560
2015	C\$11.8m	24,795
2016	C\$11.4m	19,204

Source: Interac

ATM DENSITY

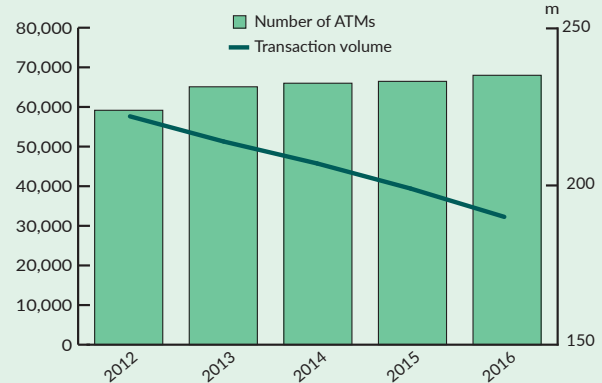
Number of ATMs per 1 million inhabitants



Source: Interac

ATM AND TRANSACTION VOLUMES

Number of ATMs versus Interac cash transactions



Source: Interac

DEBIT GROWTH

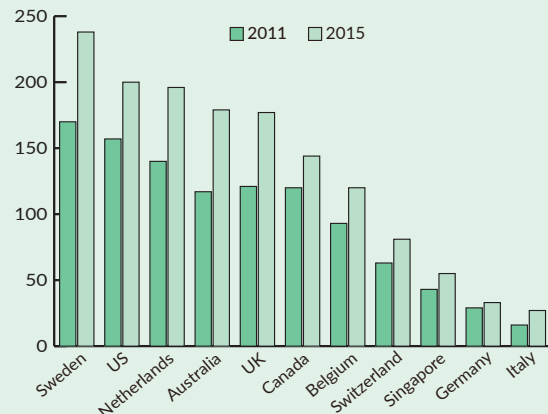
Interac debit transactions



Source: Interac

TRANSACTION GROWTH

Debit transactions per inhabitant per year



Source: Bank for International Settlements

In December 2017, Interac partnered with Toronto-based nanopay, a real-time payment platform providing instant settlement across multiple currencies, to enable secure, real-time digital transfers from Canadian bank accounts to international high-volume remittance corridors. The first rollout will be payments to India.

CONTACTLESS/MOBILE

Interac launched the Interac Flash contactless EMV debit specification in 2010, and over the last year has embraced the various 'Pays' – such as Apple Pay, Samsung Pay, and Android Pay. The debit specification also offers a capability for FIs to include Interac Flash in their proprietary mobile wallets.

All Interac mobile transactions are processed via the Interac Token Service Provider (TSP), which is a proprietary tokenisation platform that generates a sequence of numbers valid for a single transaction only. Gamble says Interac was the first domestic debit scheme to launch its own TSP platform.

"We have an incredible contactless acceptance footprint in Canada," explains Gamble. "Many of the POS terminals at the 500,000-plus card-accepting merchant locations across Canada are capable of accepting contactless payments."

ROADMAP FOR 2018

Gamble notes that Interac is focusing on opening its Interac e-Transfer APIs to developers through its developer portal. "We held a collision day at the Kitchener, Ontario Communitech Fintech Incubator in May 2017, and will hold a hackathon at the University of Toronto in 2018," she says.

At the collision day, Interac announced that it would integrate its Interac e-Transfer third-party APIA with three Canadian startups – OpenSports, Dibbz and Navi – to help them enable faster payment experiences for their customers.

"We will continue to enhance Interac e-Transfer Bulk Disbursement for businesses, and will also develop in-app and in-browser mobile payments for Interac Online," Gamble says. "Interac Online has been seeing a lot of growth already."

Interac is very interested in providing its TSP services for digital ID certification, both in the financial services space and in other areas such as e-government, says Gamble. Interac has a seat on the board of SecureKey, which is working with Canadian banks to develop a blockchain-based nationwide digital ID scheme.

"Canadian consumers already trust Interac, so there is scope for us to leverage our technology to provide digital ID services," says Gamble. ■

REVOLUT: A NEW VISION FOR CRYPTOCURRENCY

Whether you are an advocate or a critic of cryptocurrencies, one cannot ignore the shockwaves they have been sending through the financial industry. Revolut is no stranger to new and innovative technologies, and has now delved into the realm of cryptocurrencies, reports *Briony Richter*

UK banking startup Revolut has been hitting the headlines in recent years. In November 2017, the company announced gaining one million customers, and now it has brought three cryptocurrencies on board.

Bitcoin, Litecoin and Ethereum are now available for Revolut customers to trade, hold and buy in all of the 25 base currencies that Revolut offers.

Exchanges such as Coinbase and eToro impose complicated fee structures when buying a cryptocurrency, usually involving multiple rates, deposit charges and hidden fees. Overall, this can potentially cost the customer a 5-9% mark-up on the average exchange price, whereas Revolut only charges 1.5%, with no other hidden fees.

Speaking to *EPI*, head of global brand and communications at Revolut, Chad West, explains the benefits of being involved in cryptocurrencies.

"I think there are a lot of misconceptions around why we did it," he says. "A lot of people think we did it for the traders, the real crypto-enthusiasts, but actually it was the complete opposite. We wanted to bring the exposure of cryptocurrencies to the masses. Right now it's everywhere – on social media, all over the news – and a lot of people want to get involved."

"We've implemented a way in which people can seamlessly get exposure to cryptocurrency in 30 seconds, with just a single tap and it will appear in their Revolut account. There is huge demand from consumers to engage in it, and I would say that we at Revolut are the first to bring crypto to the mainstream."

The fintech sector has been at the forefront of exploring the potential of cryptocurrencies in the financial industry, and now banks are starting to embrace blockchain technology. Earlier this year a roster of banks, including HSBC, Barclays, State Street, Credit Suisse, MUFG and the Canadian Imperial Bank of Commerce, joined UBS's blockchain initiative.

Although Revolut has only just launched cryptocurrencies, West says the company has been looking into them for nearly two years.

"Everything we do is based on dialogue with our customers. We are very much community-driven, and cryptocurrency exposure was the number one requested feature from our customers in 2017."

Knowing who the customers are on a personal level enables Revolut to gain insight into their activities, and learn more about

how to deliver better, more tailored services. West states that by adopting cryptocurrencies, Revolut has attracted more customers that are exclusively interested in them.

"It's been predominantly millennials, but there have been older customers as well. We have seen a lot of new customers between the ages of 18 and 30 coming to Revolut purely for cryptocurrencies. We can now expose them to not just the cryptocurrency part, but everything else we have to offer."

If cryptocurrency was once seen as a tool for underground criminal activity, it has now become the topic of conversation at the dinner table. Bitcoin itself, however, has had its fair share of critics. JPMorgan Chase CEO Jamie Dimon has called Bitcoin "a fraud". Philip Lowe, governor of the Reserve Bank of Australia, also dismissed Bitcoin, calling the fascination with the cryptocurrency "speculative mania". For Revolut, the bubble is not going to burst any time soon.

Asked about the future for cryptocurrency, West predicts: "It will become more mainstream. More companies will start rolling out cryptocurrency spending cards. It has got a good future, and I think Bitcoin will continue to grow."

"In terms of regulation, if it can be done, I hope it would be done in a way that supports cryptocurrencies. We are looking to take on more digital currencies – possibly one or two more in 2018."

West acknowledges that there are risks with cryptocurrencies, but if harnessed securely he believes they can have a positive impact on the financial sector.

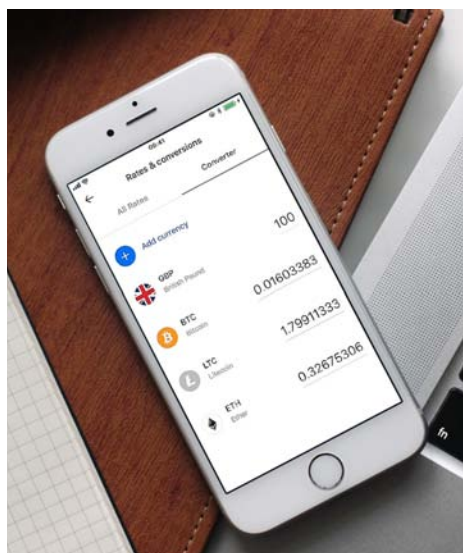
A diverse and energetic young company, Revolut focuses on continuing to create innovative products and services for its customers. Often a secondary account for customers, Revolut has seen its numbers rise in terms of active daily usage.

West highlights: "It's been a journey. We are now showing around 250,000 daily active customers. That implies that 250,000 people are using Revolut as their main account."

"We are averaging over 600,000 monthly active customers. That figure indicates a combination of people using it monthly for spending but not necessarily every day."

The future of the financial industry will be paved with disruptive technological advances. Despite the popularity and current boom in price, cryptocurrency is not without risk: it is a volatile commodity that could quickly drop in value at any moment.

Nonetheless, it is a technological advance that is not going away any time soon. ■



COUNTRY SNAPSHOT: HONG KONG

Multi-currency cards on the rise

Hong Kong is a global financial hub, with few barriers for foreign banks and card payment participants, which encourages banks from Mainland China and overseas markets to expand into the Special Administrative Region.

Hong Kong represents a mature payment card market in Asia, with 25 million payment cards in circulation and a population of just over seven million.

Payment cards are the second-most-popular payment instrument in Hong Kong, accounting for 22.4% of the payment transaction volume in 2017. Growth in Hong Kong's payment card market is driven by pay-later cards, which accounted for 76.4% of the total payment card transaction volume in 2017.

Banks are offering multi-currency payment cards to capitalise on the increasing trade between Hong Kong and Mainland China, and the fast-growing Chinese population working and studying in Hong Kong.

The cards can be used to transact in local and Chinese currencies. Expenses in Hong Kong and overseas are settled in local

currency, while those made in Mainland China are settled in yuan.

Hong Kong represents a HK\$112.2bn (\$14.3bn) e-commerce market. High internet and smartphone penetration have positioned the country to see strong growth in e-commerce.

Credit cards are the primary payment tool for e-commerce, with 43% of consumers highlighting its convenience. However, cash and cheques still form a sizable part of this market, with 11%.

Octopus – one of the world's first contactless cards – is one of the most-used smart cards in Hong Kong. As of December 2016, 32.8 million Octopus cards were in circulation in Hong Kong – around four times its population.

PAYMENT CARDS BY TYPE (MILLION)

	DEBIT	PAY LATER
2013	5.5	18.1
2016	5.7	19.2
2017e	5.8	19.3
2021f	6.1	20.2

Source: Hong Kong Monetary Authority, GlobalData

CARD TRANSACTION VOLUMES BY CHANNEL (MILLION)

	ATM	POS
2013	47.7	576.2
2014	48.6	600.3
2015	51.5	642.0
2016	53.9	689.7
2017e	55.9	737.6
2018f	57.7	785.0
2019f	59.3	830.5
2020f	60.7	875.3
2021f	61.8	919.3

Source: GlobalData

The Octopus Card was initially launched for public transport, and is now widely accepted at convenience stores, restaurants and supermarkets in Hong Kong. However, with the arrival of new technologies and services by electronic payment providers, the Octopus Card is experiencing tough competition.

In June 2017, UnionPay launched its HCE- and tokenisation-based mobile payment service, QuickPass, enabling users to pay using a UnionPay QuickPass chip card or mobile QuickPass-enabled smartphone or wearable device at contactless POS terminals.

In May 2017, Samsung Pay was introduced in Hong Kong, allowing users to make purchases at participating stores with Samsung devices at all forms of terminal, including magnetic stripe, EMV and NFC.

In June 2017 HKT Payments announced that Bank of China customers who use the Tap & Go wallet can instantly add funds through the Instant Bank Transfer option in the top-up menu. Tap & Go consumers can recharge the wallet by using local coins at Heycoins kiosks. ■

CARD TRANSACTION VALUES BY CHANNEL (\$ BILLION)

	ATM	POS
2013	19.4	92.0
2014	20.4	98.9
2015	22.0	107.1
2016	22.6	110.2
2017e	23.7	114.4
2018f	24.7	118.9
2019f	25.7	123.8
2020f	26.6	129.0
2021f	27.4	134.5

Source: GlobalData

NUMBER OF ATMS AND POS TERMINALS (THOUSAND)

	ATM	POS
2013	3.2	535.1
2014	3.2	559.3
2015	3.2	583.0
2016	3.3	609.0
2017e	3.3	637.3
2018f	3.3	665.5
2019f	3.4	693.3
2020f	3.4	721.3
2021f	3.4	748.7

Source: Hong Kong Association of Banks, GlobalData

COUNTRY SNAPSHOT: TAIWAN

Cash continues to dominate

Cash remains the preferred method of consumer payment in Taiwan, accounting for more than three-quarters of the total transaction volume.

Consumers in Taiwan have a strong inclination for cash for day-to-day transactions, despite the gradual rise in electronic payments.

The government of Taiwan has been promoting electronic payments through various initiatives, and the necessary payment infrastructure is in place.

However, ATMs are ubiquitous, the retail environment is highly competitive, and the dense urban environment lends itself to the use of cash. Meanwhile small informal merchants with low margins are typically unwilling to absorb the direct cost of card payments, even though cash often attracts higher indirect costs.

Debit card penetration in Taiwan stood at 413.8 cards per 100 individuals in 2017, the highest rate among its regional peers. However, debit card use is mostly restricted to ATM cash withdrawals, which record a frequency of use 10 times higher than for POS transactions. This is because

consumers prefer cash for low-value transactions at retail outlets, which is one of the challenges hindering debit card use.

The average transaction value for debit cards is higher than for credit cards, which stood at only TWD2,601 (\$80.20) at POS in 2017. At around once per year, debit cards are used on the rare occasions when other payment methods are not accepted. As an average figure, transactions are spread over numerous cards that recorded zero transactions.

Taiwan's e-commerce market is one of the fastest-growing in Southeast Asia, driven by rises in internet and smartphone penetration. E-commerce is acting as a driver for electronic payments growth, owing to the availability of multiple options

such as debit and credit cards, card on delivery, bank transfers, and digital and mobile wallets.

E-commerce will grow in the low-value transaction space as consumers become more inclined to buy products using mobile phones.

Taiwanese consumers have been familiar with contactless payments since the introduction of the EasyCard subway transit cards in 2002, and awareness is very high as a result. In addition to contactless cards, mobile contactless payments are also gaining prominence, supported by mobile solutions such as Apple Pay, Android Pay and Samsung Pay.

Prepaid cards are increasingly gaining acceptance, as they do not require a bank account and are accessible to consumers without a debit or credit card.

EasyCard is the most popular multi-purpose stored-value card, offered by EasyCard Corporation for public transit. It can also be used to pay bus and taxi fares, as well as fees at designated car parks, stores, government facilities, hospitals and tourist destinations. ■

PAYMENT CARDS BY TYPE (MILLION)

	DEBIT	PAY LATER
2013	83.5	35.9
2016	94.7	40.7
2017e	97.6	42.7
2021f	108.4	48.6

Source: Central Bank of the Republic of China (Taiwan), GlobalData

CARD TRANSACTION VALUES BY CHANNEL (\$ BILLION)

	ATM	POS
2013	267.8	77.8
2014	283.8	84.6
2015	292.1	90.5
2016	297.7	97.2
2017e	303.1	104.1
2018f	307.9	111.1
2019f	312.2	118.2
2020f	315.8	125.4
2021f	318.5	132.7

Source: GlobalData

CARD TRANSACTION VOLUMES BY CHANNEL (MILLION)

	ATM	POS
2013	712.9	797.2
2014	739.8	865.1
2015	766.5	930.7
2016	783.2	1,004.4
2017e	798.7	1,078.1
2018f	813.8	1,151.6
2019f	829.5	1,225.0
2020f	844.3	1,299.3
2021f	857.7	1,373.7

Source: GlobalData

NUMBER OF ATMS AND POS TERMINALS (THOUSAND)

	ATM	POS
2013	26.8	103.2
2014	27.1	108.7
2015	27.4	113.0
2016	27.2	117.1
2017e	27.2	120.9
2018f	27.2	124.4
2019f	27.4	127.6
2020f	27.7	130.6
2021f	28.0	133.3

Source: Banking Bureau of Taiwan, National Credit Card Centre, GlobalData

COUNTRY SNAPSHOT: INDONESIA

Payment cards set for growth from low base

Cash remains the predominant payment instrument in Indonesia – especially among the rural population – accounting for 98.4% of the total volume of payments in 2017.

This was primarily due to low awareness of electronic payments, a high unbanked population, and limited access to banking infrastructure. The modernisation of the country's payments infrastructure with the introduction of the National Payments Plan, the transformation of cards to incorporate EMV technology, and the National Non-Cash Movement will support the transition to non-cash payments.

The government and the central bank are aiming to develop the electronic payment system in the country, with initiatives such as support for a national shared ATM network, and allowing foreign investment in e-commerce. As a result, payment cards will grow steadily over the next few years and will gradually become more accepted.

Debit cards remain the preferred payment cards among Indonesian consumers. However, use is mostly restricted to ATM cash withdrawals, with

frequency of use nine times that of POS transactions. This is primarily because both consumers and merchants still prefer cash. However, with efforts by the government to enhance the POS infrastructure and card acceptance, the number of POS transactions has risen.

While frequency of debit card use is anticipated to rise consistently over the period to 2021, the average transaction value at the POS will record a CAGR of 0.7%. This shows a gradual migration of debit card use for low-value POS transactions.

However, there is still a long way to go before cards reach regular usage levels, with the average card expected to be used only once every three months by 2021.

PAYMENT CARDS BY TYPE (MILLION)

	DEBIT	PAY LATER
2013	83.2	15.1
2016	127.8	17.4
2017e	141.2	18.2
2021f	194.9	22.6

Source: Bank Indonesia, GlobalData

Strict government regulation on credit card eligibility remains a major reason for their low penetration. Mounting consumer card debt led the central bank to introduce a regulation, effective from January 2015, prohibiting individuals with an annual income of less than IDR3m (\$222) from possessing credit cards.

Until February 2016, e-commerce was on the government's Negative Investment list, and foreign investors were not allowed to invest in local companies or set up businesses. The government introduced a new foreign direct investment policy in February 2016 allowing 100% foreign ownership of e-commerce companies for investments over \$7.4m; for investments between \$740,000 and \$7.4m, foreign ownership was capped at 49%.

However, the regulation was revised in May 2016 to limit foreign ownership in e-commerce companies at 40%.

Indonesia's e-commerce market is forecast to register a CAGR of 23% to 2021, the third-highest rate compared to peers Pakistan (33%) and India (24%), indicating significant growth potential. ■

CARD TRANSACTION VALUES BY CHANNEL (\$ BILLION)

	ATM	POS
2013	115.5	27.1
2014	132.8	31.9
2015	146.5	35.8
2016	164.1	38.8
2017e	182.9	42.6
2018f	203.0	46.7
2019f	224.2	50.9
2020f	246.4	55.3
2021f	269.6	59.9

Source: Bank Indonesia, GlobalData

CARD TRANSACTION VOLUMES BY CHANNEL (MILLION)

	ATM	POS
2012	2,186.0	478.5
2013	2,465.9	542.6
2014	2,727.4	623.5
2015	3,055.2	722.0
2016 (estimated)	3,400.2	822.3
2017	3,763.3	928.9
2018	4,136.0	1,038.3
2019	4,516.4	1,150.4
2020	4,903.9	1,261.9

Source: Bank Indonesia, GlobalData

NUMBER OF ATMS AND POS TERMINALS (THOUSAND)

	ATM	POS
2013	75.9	634.7
2014	90.7	842.7
2015	99.3	1,005.2
2016	103.4	1,050.2
2017e	107.3	1,135.0
2018f	111.6	1,222.5
2019f	116.6	1,311.5
2020f	122.3	1,401.0
2021f	128.7	1,490.6

Source: Bank Indonesia, GlobalData

PLATFORMISATION OF THE PAYMENT ECOSYSTEM



It is very apparent that players in the payment arena need to become more agile to adapt to the dramatic changes in the market, writes **Urs Gubser**, head of e-commerce at SIX Payment Services

As we all know, the payment industry is undergoing significant change. This development is driven by regulatory, technological and social changes.

As a result it is very apparent that existing players in the payment arena need to become more agile in order to adapt to the dramatic changes in the market.

LOGICAL STEP

The most logical step for financial service companies and payment providers to take in order to adapt successfully is to leverage their existing core business.

However, this comes with its own set of challenges as today's companies are not organised or designed for rapid market oriented changes, nor do they have the business architecture in place that would allow

bear fruit, the industry as a whole is moving towards complete digitisation.

Now, if we compare this development with the advent and ever-growing fintech environment, the difference is stark.

CLEAN BASE

Fintech companies do not have these challenges because they start from a clean base with no legacy issues and are built from the ground up to be agile.

However, some critics may argue that it is just a matter of time before fintech businesses that increase their scale create the same level of complexity that incumbents have to deal with now, and that given time their agility will slow – in the scenario, only time will tell, but for now they have the adaptive advantage.

Today however, fintech companies lack the size and scale of an established customer base,

In today's world, no company can afford to create and build everything in-house. With rapid changes in the market also come rapid changes in requirements for skills, expertise and know-how in completely new areas.

This is best illustrated in the world of artificial intelligence (AI), which is becoming one of the drivers that lead to new and exciting capabilities.

Most companies will not immediately be able to create new programmes that deal with these changes, but they realise that these developments can greatly benefit their own customers.

Companies that have understood this attempt to stop disintermediation by becoming more valuable through their own ecosystem which is accessed through their platform.

UTILITY OR COMMODITY

In many ways, this is not that different from how Apple's ecosystem keeps its consumers 'locked in' with ever new features and gadgets, or how Amazon's ecosystem increases switching costs – convenience – with programmes such as Prime.

Today's traditional players in the payment cards business risk rapidly becoming a utility or commodity that is easily swapped out. That is the driver behind payment service providers becoming platform businesses with the help of the fintech sector and other providers in order to re-intermediate the customer.

The possibilities and opportunities are vast, and by working together, the payment industry and the fintech sector have an opportunity to truly change the landscape and deliver services that offer real value to the industry. ■

“ WITH RAPID CHANGES IN THE MARKET ALSO COME RAPID CHANGES IN REQUIREMENTS FOR SKILLS, EXPERTISE AND KNOW-HOW

for rapid changes to take place. That holds true for banks and payment institutions alike.

In order to overcome this, companies inevitably try different things, such as attempts to disrupt themselves with initiatives to become 'digital'. For example, this could be to build up a digital shadow company or look for ways to partner with more agile external providers to become 'digitally organised'.

While most of this activity will likely take years to implement in order for it to really

which takes years to build and is something that established players can provide. If only there were a way to give these fintech companies access to customers, and for incumbents to benefit from the fintech sector's developments.

This has brought the whole payment industry to a position where there is a race to become a platform from which fintech providers could offer their services. But why even let fintech participate?

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21st March 2018 • Stockholm, Sweden

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At this critical point, **Retail Banking: Nordics 2018** will bring together more than 200 industry leaders from traditional and new banks, providers and other key industry stakeholders and influencers. This comprehensive and inclusive event will explore, through a series of keynotes, panel sessions and round tables the opportunities and challenges financial institutions face as they enter an era of truly digital banking.

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- PSD2: what happens next?
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- AI and machine learning: hype or reality?
- Digital identity and biometrics
- New and disruptive business models
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to engage, discuss and meet the leading game changers in the industry and to formulate new strategies and business models to take you forward in this brave new world of retail banking.

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