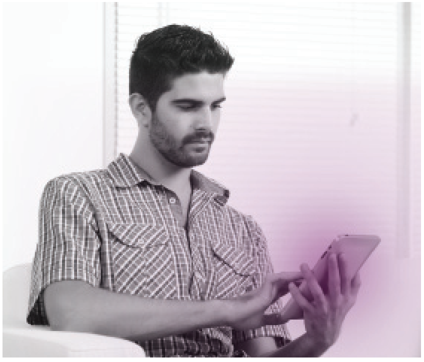
ELECTRONIC PAYMENTS INTERNATIONAL

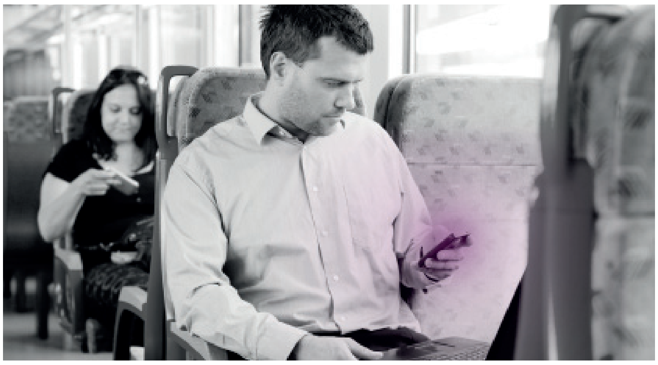
February 2016 Issue 344
www.electronicpaymentsinternational.com

YELLOWPEPPER TAKING LATIN AMERICA BY STORM

- FEATURE: 2016 Forecasts
- DEBATE: Digital Banking Club
- COUNTRY SURVEYS: Morocco, Italy and the US
- REVIEW: Cashless payments in Asia

timetric





CONTENTS

NEWS

3: NEWS DIGEST

FEATURE

6: SIERRA LEONE
The recent Ebola Crisis which wracked Sierra Leone in 2015 was a catalyst for change and brought a number of people into the financial system. **Alexander Atkins** writes

7: PAYMENT SECURITY
Patrick Brusnahan asks security experts on what to expect in 2016 and how to better protect consumers

8: CASHLESS IN ASIA
Xiou Ann Lim takes a look at Singapore, Malaysia and India – and what makes each market unique in terms of cashless payments

10: 2016 FORECASTS
What can the industry expect in 2016? From digital to contactless to data privacy, the year ahead looks set to have it all

12: YELLOWPEPPER
As Latin America's smartphone penetration keeps increasing, there seems no better time to bring mobile payments into the mix. YellowPepper has done just that. **Robin Arnfield** investigates

14: DIGITAL BANKING CLUB
The final Digital Banking Club debate of 2015 discussed where digital would take the financial sector. **Alexander Atkins** writes

COUNTRY SURVEYS

17: MOROCCO

18: ITALY

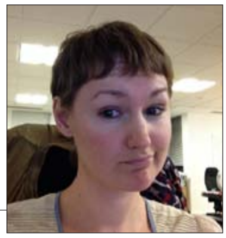
19: USA

COMMENT

2: JONATHAN WILLIAMS

20: ANDREJ EICHLER

Consumer demand drives innovation



As more and more people commute to and from the cities, so faster methods of payments are necessary. Take TfL's contactless payments drive. Sure, there were business motives for MasterCard but for TfL, the main reason was having to deal with volumes of traffic, now and even more so for future planning.

On a side note, however, one thing left to nail is the speed of connectivity with contactless bank card use and especially with wearables. The extra two seconds or so that it takes to go through a turnstile with Apple Pay or a bPay wristband could be tantamount to taking your life in your hands in ten years' time when commuter volumes have doubled and you are being pushed through at rush hour.

Arguably worse than the wrath incurred at the Christmas party bar, amid the cacophonous din that is your colleagues in celebration mode, when taking fifteen minutes to order the same amount of drinks two at a time for all your mates, for example. I've seen it and it isn't pretty.

Hopefully in 2016 consumers' demand will speed this process up.

There were two payment leapfrogs in 2015, spurred on by crises in Sierra Leone and Greece. In the former, during the harrowing Ebola outbreak, the demand of paying the sudden influx of medical workers proved impossible in the banking space that existed and the situation proved a catalyst for mobile payment adoption. We report on this in depth on page 6.

In Greece, when the government curtailed cash withdrawals, card payments took a leap forward in a very short space of time. As Andrea Fiorentino, head of European go-to-market mobile propositions at Visa Europe told us in a recent interview, in the two weeks immediately following the introduction of controls, there was a 135% increase in Visa card transactions compared to the fortnight before. The number of active Visa debit cards in Greece more than doubled in July, compared with the previous quarter's average.

This shift from cash to card has is ongoing in Greece. Card transactions towards the end of 2015 were up 128% (year-on-year), compared to just 9% in the quarter before controls were introduced.

Couple this with how fast some banks implemented Apple Pay, despite the odd initial glitch or delay. Basically in seven months, they made a massive transformation. It just goes to show where there is a will there is a way. In some cases, necessity is indeed the mother of invention. In others, it is simply a positive top-down attitude that accelerates progress.

Anna Milne
Anna.milne@uk.timetric.com

ELECTRONIC PAYMENTS INTERNATIONAL

Financial News Publishing, 2012
Registered in the UK No 6931627

ISSN 0956-5558

timetric

MEDIA PIONEER AWARDS COMMENDED 2011

Editor: Anna Milne
Tel: +44 (0)20 7406 6701
Email: anna.milne@uk.timetric.com

Group Editor: Douglas Blakey
Tel: +44 (0)20 7406 6523
Email: douglas.blakey@timetric.com

Reporter: Patrick Brusnahan
Tel: +44 (0)20 7406 6526
Email: patrick.brusnahan@uk.timetric.com

Asia Editorial: Xiou Ann Lim
Tel: +65 6383 4688
Email: ann.lim@sg.timetric.com

Group Publisher: Ameet Phadnis
Tel: +44 (0)20 7406 6561
Email: ameet.phadnis@timetric.com

Sub-editor: Tom Langfield
Director of Events: Ray Giddings
Tel: +44 (0)203 096 2585
Email: ray.giddings@timetric.com

Head of Subscriptions: Sharon Howley
Tel: +44 (0)203 096 2636
Email: sharon.howley@uk.timetric.com

Sales Executive: Alexander Koidis
Tel: +44 (0) 203 096 2586
Email: alexander.koidis@uk.timetric.com

Customer Services:
Tel: +44 (0)203 096 2636
or +44 (0)20 3096 2622
Email: customer.services@uk.timetric.com

For more information on Timetric, visit our website at www.timetric.com. As a subscriber, you are automatically entitled to online access to *Electronic Payments International*. For more information, please telephone +44 (0)203 096 2636 or email customer.services@timetric.com

London Office
5th Floor,
Farringdon Place,
20 Farringdon Road,
London, EC1M 3AP

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

Greater security and competition afoot

With upcoming changes, such as the Payments Services Directive 2, making their way towards the financial sector, institutions need to up their game to remain competitive. With the cross-border payments sphere quickly morphing, what can banks do to stay ahead of the curve? **Jonathan Williams** argues

In two years, the Payments Services Directive 2 (PSD2) will become law. Sure, this seems a while off yet, but with around 100 or so pages of dense legislation, it makes sense to start digesting it now!

Voted in by the European Parliament to improve cross-border payments, it follows on from the first version in 2007, which created a new legal framework for payments.

Here are the key areas that corporates should be thinking about.

More players and improved services

There are two key advantages. Firstly, corporates and consumers will be able to control their bank accounts using 'third party providers'.

If you, as a corporate, feel your current service is not meeting your specific banking needs, then you will be able to use a third party provider (or a Payment Initiation Service Providers according to PSD2) to access account information or initiate payments instead.

This may be an organisation that provides your business and mobile applications, for example. You would give them permission to integrate, say, with your ERP or payroll system. The potential is a more appropriate service for your business.

Under the new rules, however, third parties will be more liable and need to insure themselves in case anything goes wrong.

While it's certainly a good thing in my eyes, it does mean such services will no longer be free.

Secondly, PSD2 has created Account Information Service Providers – third parties, who can go into your business bank account and analyse your information eg statements.

Corporates can then better understand their current position and see where improvements could be made.

Security first

Such an open payments market raises questions about security. Everyone, corporates and consumers, need reassurance that their data and systems are only being accessed by those who should have access to them.

With PSD2, Payment Initiation Service Providers must have stronger customer authentication processes in place.

They must establish: something you know, a password for example, something you have e.g. token and something you are, such as your biometric authentication.

Plus, fraudsters must not be able to replay authentication data and get a successful payment.

This is the first time common standards on how a bank establishes their customer's identity will be in place.

What's changing?

With PSD2, providers will know exactly where they stand. It will clarify the uncertainty that was present with the first 2007 directive around what was covered by the laws, such as payments and receivables 'on behalf of', or how payments should be directed.

Furthermore, PSD2 now covers 'one leg in' and 'one leg out' transactions – payments that either start in Europe and end elsewhere, or start elsewhere and end in Europe – and includes all currencies.

Until the changes actually filter down to national and business level, it's important that businesses start considering them now and recognise that PDS2 is not just an update.

It will make online payments safer and it creates greater competition in the marketplace. ■

Jonathan Williams is the director of payments strategy at Experian UK

MOBILE

Ooredoo Group to deploy GoSwiff's mPOS solution

Qatar-based telecommunications provider Ooredoo Group has chosen start-up company GoSwiff as its global mobile payment and marketing solution provider.

The partnership that covers nine countries - Algeria, Indonesia, Iraq, Kuwait, Myanmar, Maldives, Oman, Qatar and Tunisia - will include recruiting merchants to the platform, from large corporates to micro-merchants.

As part of the agreement, GoSwiff will provide Ooredoo with mPOS (mobile point-of-sale) technology, mobile money, airtime top-up for Ooredoo's merchant clients and some value added services.

The deal enables Ooredoo Group to outsource managed services for mPOS to GoSwiff, including merchant profiling, segmentation and engagement with different industry verticals.

Ooredoo Group CEO H.E. Sheikh Saud Bin Nasser Al Thani said: "With its comprehensive range of services and international experience, GoSwiff is a strong partner to help Ooredoo build our mPOS platform."

GoSwiff CEO Simone Ranucci Brandimarte said: "We are proud to have been selected by Ooredoo Group as its global partner as the company introduces its offer of mobile payments to nine exciting markets across North Africa, Middle East and South East Asia." ■

Strategy

Powa and UnionPay sign deal for m-commerce in China

British payments start-up Powa Technologies, through its local joint venture, has entered into a ten-year strategic alliance with UnionPay Network Payments to bring its mobile payment app to the Chinese market.

Powa's joint venture was formed to help retailers capture China's huge Online to Offline (O2O) market, which is worth CNY304.9bn ($47bn) as of the first half of 2015.

Under the new partnership, UnionPay Network Payment's mobile payment and point-of-sale solution will be integrated with Powa's market mobile commerce platform, PowaTag, to create a co-branded version of the app called PowaTag UnionPay.

Powa's smartphone app called PowaTag allows customers to complete purchases with their smartphones instantly.

The joint venture will first roll out in Guangdong Province to give the region's 106 million-strong population the ability to transact with 400,000 merchants, before expanding to all six million merchants across the country.

By the end of 2016, PowaTag is expected to allow 50 million Chinese consumers to transact with one million merchants. PowaTag, which has already attracted over 1,200 brands and retailers, will work across all sales channels from eCommerce to coupons and catalogues to in-store POS.

Available on both Android and iOS platforms, PowaTag does not depend on NFC-enabled POS systems and works with all China UnionPay credit or debit cards. It can also be used at any merchant that accepts China UnionPay cards.

Chairman of the joint venture Hu Jinxiong said: "Our platform is a project which operates together with UnionPay Network Payment. Our mobile internet products, O2O products and the POS system of China UnionPay connect together, speeding up integration and extending the capabilities of PowaTag.

"We have a target to reach at least 50 million consumers regularly using the platform within one year from launch."

Powa Technologies founder, chairman and CEO Dan Wagner said: "This partnership with UnionPay Network Payment will allow PowaTag to take a leading position in the mobile commerce and O2O market in China."

Powa Technologies Asia Pacific CEO Alessandro Gadotti said: "With this alliance, PowaTag will further extend its presence and strength in Asia Pacific, the fastest growing region in the world for mobile adoption, e-commerce and retail in general." ■

MOBILE

Samsung, China UnionPay to offer Samsung Pay in China

Samsung has joined forces with China UnionPay to bring its mobile payment platform Samsung Pay to UnionPay cardholders in China.

The partnership will allow UnionPay cardholders in China to manage as well as use both credit and debit cards on Samsung smartphones through Samsung Pay.

The service is expected to be launched for UnionPay cardholders in China by early 2016, following necessary tests and certification by Chinese regulators.

Cardholders can make payments through Samsung Pay by swiping and scanning their fingerprint. It addresses security concerns by offering triple-layered security that includes fingerprint identification, tokenisation and KNOX. Moreover, contactless payment on this mobile platform is accepted in majority of the country's POS terminals such as QuickPass-enabled NFC POS terminals.

Samsung executive vice president InJong Rhee commented: "With technological innovation, Samsung Pay expands the usage of mobile payment. It simplifies the procedure for better user experience, and adopts multi-layered protection to ensure security, allowing easier and safer mobile payment experience.

"The collaboration with China UnionPay, coupled with the support from major UnionPay partner banks in China, will bring this secure and easy-to-use mobile payment solution to more Samsung mobile users."

China UnionPay executive vice president Chai Hongfeng said: "This cooperation between China UnionPay and Samsung will combine the strengths of the former in payment and the expertise of the latter in mobile terminals to jointly create brand new mobile payment experience for consumers, and to further expand the user base of UnionPay QuickPass brand." ■

DIGITAL

Morpho (Safran) starts production of smart card modules for Elo

Morpho (Safran), a provider of identity and security solutions, has commenced the production of smart card modules for Elo, a 100% Brazilian payment association set up by Banco do Brasil, Bradesco and CAIXA.

The smart card operating system developed by Morpho will allow every smart card to be used for banking applications as well as for shopping with credit and debit functions, accepted at more than 1.7 million establishments and point of sales.

Morpho itself will manage the chip encapsulation process into a module, and then securely load the operating system and Elo payment application.

The Elo chip wafers will be sent directly from silicon manufacturers to Morpho's production site in Taubate, Sao Paulo state, Brazil, the company said in a statement.

Morpho do Brasil S.A. VP sales payment Marcelo Bellini Garcia said: "We are very happy that Elo chose Morpho's leading smart card technology expertise to realise this special chip-based application, developed exclusively for their payment cards in Brazil. This order decisively reinforces our strong position in the Brazilian payment market and the entire South American market."

Elo president Eduardo Chedid said: "The partnership's goal is to bring important operating earnings for Elo's members and issuers, aside from contributing significantly to the development of innovative payment technology in Brazil." ■

DIGITAL

Atlanticus and TSYS renew payments agreement

Atlanticus Holdings has renewed its 17-year partnership with US-based TSYS.

Under the renewed deal, TSYS will continue to provide Atlanticus and Fortiva with additional services including card and statement production as well as fraud prevention and risk management.

Financial terms of the transaction have not been disclosed.

Fortiva CEO Jeff Howard said: "Working together has enabled us to serve more than 17 million customers and fund over $25bn in loans. Throughout our history, TSYS has been an integral part of our success."

TSYS North America services segment president Bill Pruett said: "We will continue to work with them to ensure we are providing the cardholder solutions and outstanding customer service that they expect and that we help them in any way we can." ■

M&A

Citizens Financial taps Earthport for cross-border payments

American bank Citizens Financial Group has selected Earthport, a payment network for cross-border transactions, to provide it with cross-border payments services.

Under the partnership, Earthport will provide a global payment solution for Citizens customer base.

Earthport said that Citizens can now access its global bank payments network through a single connection to deliver payments to any beneficiary, at any bank, anywhere in the world.

The payments company added that its suite of flexible APIs offer real-time beneficiary account validation; FX and treasury management tools and reporting and analytics.

Citizens Financial currently operates over 1,200 branches across 11 states under the Citizens Bank brand. ■

DIGITAL

Apple partners with China UnionPay to bring Apple Pay to China

Tech company Apple has joined forces with China UnionPay to launch its payments platform Apple Pay in China.

Following tests and certification by Chinese regulators, the service can be accessed by China UnionPay cardholders on iPhone, Apple Watch and iPad from early 2016.

Apple Pay will address security concerns in customer payment through use of tokenisation technology.

On adding a card to Apple Pay, no actual card numbers are stored on the device and instead a unique device account number is encrypted and securely stored on the mobile device, with transactions authorised with a one-time dynamic security code.

China UnionPay executive vice president Chai Hongfeng said: "We're very excited to offer Apple Pay among a diverse set of innovative payment options that work with China UnionPay QuickPass."

Apple senior vice president of internet software and services Eddy Cue added: "Apple Pay has revolutionised the way millions of people pay every day with their iPhone, Apple Watch and iPad. China is an extremely important market for Apple and with China UnionPay and support from 15 of China's leading banks, users will soon have a convenient, private and secure payment experience." ■

MOBILE

Pangea launches new money transfer product

Pangea, an international money transfer platform, has launched a new debit-to-debit transfer product that allows users to send money via a mobile app using only debit card numbers, not bank account details.

The new service will initially be available for US to Mexico transfers.

Consumers can now download the app (Pangea Money Transfer) and complete a transfer in less than 60 seconds for a fixed fee of $3.95, the company said in a statement.

The product will enable transfer of funds to Mexico in real time using the 16-digit primary account number (PAN) on a debit card.

Pangea said its money transmitter license in Mexico and connectivity to the Central Bank payment system enables the company to provide faster, more secure and cheaper transfers.

The new offering will allow users to send real-time transfers on-the-go through their mobile devices and save up to 75% in fees, which translates to an annual savings of almost $250 per user.

Pangea founder and CEO Rahier Rahman said: "We've created a payment platform that allows people in the US to send money to Mexico without having to ask for or provide any bank account details while maintaining bank-level security for transactions." ■

MOBILE

Wirecard rolls out mobile payment solution in Spain and Ireland

Wirecard has launched boon, its new mobile payment solution for Android smartphones in Spain and Ireland.

The solution allows consumers to make mobile payments at any NFC-enabled point-of-sale terminal accepting MasterCard Contactless. It is supported on NFC-enabled Android smartphone with OS 4.4 or above.

The solution is based upon a Wirecard Card Solutions-issued digital prepaid MasterCard, and can be topped up through credit card or bank transfer.

There are plans to incorporate loyalty offers and financial services with the product, including microcredits and peer-to-peer (P2P) payments.

boon has already been rolled out in Germany, Austria, Belgium and the Netherlands.

Further, Wirecard has also introduced boon.protect that addresses security concerns by authorising all transactions with a PIN number. ■

DIGITAL

Moneris unveils new payment solution for petroleum businesses in Canada

Moneris Solutions, a Canada-based payment processing solutions provider, has unveiled a new payment solution, called PetroTrak, for petroleum businesses in Canada.

The point-of-sale (POS) solution has been designed to support and process all fleet card transactions, fleet data management and gift and loyalty programs at the POS.

The new solution will offer Canadian Petroleum-based businesses an integrated vehicle-fleet management application for their payment terminal solution.

Using PetroTrak, business owners can accept a wide variety of fleet and commercial payment cards, credit and debit card transactions.

The solution, which uses Moneris' swipe and fleet PIN technology as well as EMV chip and PIN or contactless-tap functionality, will ensure that merchant and customer card data is secure and also accept mobile payments including Apple Pay.

Moneris said that PetroTrak will provide receipt and administrative reporting, as well as the capture of fleet vehicle odometer readings.

The product will allow fleet businesses to customise their fleet payment cards to set product purchase parameters, such as purchase restrictions, for their staff cardholders.

It also features a pre-authorisation transaction functionality, which allows cardholders to allocate a defined dollar amount at the POS prior to fuelling their vehicles.

Moneris chief sales and relationships officer Jeff Guthrie said: "PetroTrak is a comprehensive, ready-to-use solution that allows small-to-medium-sized businesses to accept fleet payment cards and capture required transaction details in line with industry reporting standards." ■

STRATEGY

Payvision makes strategic investment in PayPlaza

Payvision, a global acquiring network, has confirmed that it has made a strategic investment in payment software company PayPlaza.

The strategic investment will create an end-to-end personalised payments ecosystem for merchants, Payvision stated. The combined solution will enable for smooth cross-border e-commerce processing and a unified, omnichannel platform.

Through this agreement, Payvision will be able to add a POS/ mPOS solution to its global payment processing offering, enabling partnering merchants to deploy a unified processing system with omnichannel functionality.

The deal will allow both the parties to streamline the user experience and empower merchants to grow their business.

Payvision COO Gijs op de Weegh said: "Our omnichannel package gives merchants an opportunity to migrate away from their multi-vendor strategies and implement a totally integrated, end-to-end platform for all their payment processing.

"By leveraging the global card processing experience of Payvision, the innovative POS/mPOS technology of PayPlaza, and the complete collecting PSP platform with cards, alternative and POS payments of Acapture, our clients now have access to a full suite of omnichannel tools behind one central interface and with unified reporting.

PayPlaza CEO Edgar Plasa said: "By being part of Payvision's group and global network, PayPlaza and its merchants benefit from economies of scale, tremendous knowledge and years of experience in the payment processing landscape." ■

M&A

Global Payments to buy Heartland Payment for $4.3bn

Global Payments, a provider of payment technology services, has agreed to acquire Heartland Payment Systems for $4.3bn.

In addition to strengthening Global Payments' US direct small and medium-sized enterprise distribution, merchant base and vertical presence, the acquisition is expected to create a combined entity that will be owned by about 84% of existing company shareholders and serve nearly 2.5 million customers.

The merger will create an opportunity to cross-sell Heartland's point of sale, payroll, loyalty and gift solutions into Global Payments' core US and international market.

The transaction, which is subject to approval by regulators and Heartland's shareholders, is expected to close in the fourth fiscal quarter of 2016.

Global Payments CEO Jeffrey Sloan said: "This partnership with Heartland marks a major milestone for our company, significantly enhancing our direct presence in our largest market and transforming Global Payments into the leading provider of integrated payments technology solutions in the world."

Heartland chairman and CEO Robert Carr said: "Under Jeff's leadership, I believe the combination of our companies will become the most valuable payments company on the planet. In the US, Heartland will continue to operate under its brand and under its business model of fair dealing - with the Merchant Bill of Rights and the Sales Professional Bill of Rights guiding the way to future growth and innovation." ■

Sierra Leone paves the way for mobile money

Financial inclusivity is not what Sierra Leone has been known for. Until now, only 16% of the country had access to a bank account leaving over three quarters excluded from the financial system. But the recent Ebola Crisis which wracked the region last year provided a catalyst for change writes Alexander Atkins

The response by the United Nation Development Programme (UNDP) and the World Health Organisation (WHO) to the epidemic was swift, hoping to tackle the disease before it swept out of control. To do this, they recruited well over 24,000 Ebola response workers, operating under the United Nations Mission for Ebola Emergency Response, to help in aiding the fight against Ebola.

This monumental force was key in stopping the spread of this lethal disease, yet one of the major challenges for these staff came when payday arrived. With so many health workers spread through such a large area, and all receiving different levels of payment through different means, there was sure to be a problem. The result was numerous strikes by staff all over the country that left not only Ebola patients unattended but also normal medical cases such as pregnancies. The effect was crippling.

The government of Sierra Leone needed a solution. They had to devise a way to pay the army of staff that worked throughout the country the right amount at the right time, no easy task when one realises that until then, it was very much a cash in hand situation. The UNDP put themselves to the task, looking to find a common factor that could connect the scattered legion of workers. That common factor was mobile usage. Whilst a tiny amount of the population had access to a bank account, the majority had access to a mobile network, as there is 82% coverage across Sierra Leone.

Mobile money schemes are certainly not new to Africa. The success of MPESA in Kenya, the mobile money transfer service started there by Vodafone through Safaricom, is testament to that fact. But the idea was to go further than MPESA had gone, and connect the mobile with a bank account. "We needed to devise a way to pay front line workers on time, pay them the right amount and pay the right frontline workers" says Tenzin Keyzom Ngodup, a programme manager and technical specialist with the UNDP in Sierra Leone. "Paying the workers on time was the most critical element to avoiding strikes. The idea of paying through mobile wallets helped us to achieve this."

The UNDP devised a mechanism that would allow digital hazard payments to be made to the Ebola response workers. Tenzin explains that the benefits became apparent almost immediately: "After we successfully instituted the mobile wallet, we realised there were so many other improvements. Payments were more transparent, the recipients' experience was vastly improved and the whole idea lowered the costs for the government and development partners for paying these workers."

But as the Ebola crisis was slowly brought under control, the idea gained momentum and interest, especially from an administration governing over a country where the mass majority are not included in any formal financial system. As Tenzin says "The financial disclusion is huge, the products offered by banks are not designed for the masses so digital financial inclusion has a big role to play in West African banking."

Fast forward to November 2015, and the mobile money system has moved one step further. The Bank of Sierra Leone and The Central Bank has partnered with UNDP and the United Nations Capital Development Fund (UNCDF) to launch the country's first mobile money regulations. The Central Bank believes that these regulations will be crucial to accelerating the delivery of mobile finance to the majority of people in Sierra Leone. When asked what effect these regulations would have, Tenzin believed they are a major step: "These guidelines bring mobile money under the purview of the Central Bank, increasing scope for Mobile Network Operators (MNOs) and licenced financial institutions to collaborate. This is also the first step to protecting consumers during digital payments."

The bank governor, Momodu Kargbo, was adamant that these measures would create total financial inclusion across the country. "This is not only for the convenience but as an avenue to ensure that as many Sierra Leoneans as possible are included in the formal financial system of our country" Kargbo stated. "This is the first step towards encouraging people to adopt electronic channels of payments and move away from the traditional use of cash as means of payments and settlements of financial obligations."

However, the new system does not cut the banks out; their role is instead transitioning towards a partnership with the mobile network providers. As Tenzin explained, "Banks will be the account underwriters, while MNOs offer the network. However different kinds of revenue sharing and risk sharing models are possible. "

To further the drive to move from a cash based system to a digitised financial economy, the Sierra Leone government has joined an international partnership known as the Better Than Cash Alliance (BTCA). The organisation includes sixteen governments as well as partners such as Visa, MasterCard, USAID, and The Ford Foundation among others. The Alliance aims to move the global economy to a cashless system and is working with government the world over to achieve digitalisation.

In joining, Tenzin explains, Sierra Leone becomes part of a group of governments and organisations who are looking to a digital future. "Its membership highlights its commitment to continue the nation's digitisation of payments to realise additional benefits for its people" Tenzin says. "Through BTCA, Sierra Leone joins the league of other countries and engages in peer-to-peer learning."

With the new regulations, the mobile money system looks set to grow and Sierra Leone will be hoping for it to be one of the financial success stories of the future. From its early beginnings during the Ebola Crisis to the announcement of the new regulations, it looks set to provide financial inclusivity to the majority of the population, bringing many under the digital wing. Although there is still a long way to go, it is certainly an example of Africa looking to a digital future. ■

How can payments become more secure in 2016?

According to technology firm Ovum, 61% of banks will significantly increase their payment technology expenditure in 2016. The firm also found that this boost in spending can be partly attributed to a larger emphasis on security. **Patrick Brusnahan** talks to experts on why security is set to take 2016 by storm

Ovum's report, 2016 Trends to Watch: Payments, stated that banks' raising investment in payment tech is aided by growing concerns over security and the need for regulatory compliance, with over 70% of retail banks reporting a rise in expenditure of security and anti-fraud technologies.

In addition, 34% of banking respondents cited biometric technology as a priority in the coming year.

Gilles Ubaghs, senior analyst at Ovum, explained: "Security is always a core issue for both vendors and enterprises alike and the market is set to see renewed levels of investment activity in 2016. This will be driven by the need to find new means of authentication while reducing risk and the burgeoning growth in tokenisation technologies. Investment in the US in particular is likely to be high as the country continues its shift towards EMV."

Prepaid offerings

One solution offered to combat fraud and increase security is prepaid cards. The simplicity of the product also allows financial institutions to reach out to the unbanked populations of the world.

Ross Macmillan, head of research and intelligence at allpay, said: "Globally, there is huge demand for prepaid cards for the unbanked across Europe and Africa.

"Governments around the world are looking towards prepaid for electronic payment solutions to fight fraud, combat corruption and deliver social benefits – particularly in Africa."

John Sharman, CEO of Tuxedo Money Solutions, said: "Prepaid card usage varies across Europe. Italy currently leads the way and has the highest growth prospects both in terms of transaction value and volume of cards in issue. Conversely, the Austrian prepaid marker is in its infancy and, in Germany, 80% of all consumer transactions are conducted in cash.

"The need for an alternative method of paying for goods and services abroad has paved the way for new 'cashless' options, which has prompted further advancements in prepaid payment technologies."

High-profile breaches

While keeping customers' data and finances secure is crucial, another important aspect is maintaining banks' reputations.

2015 saw a number of high profile breaches. A security hole in Halifax and Bank of Scotland's online banking facilities left tens of thousands of customers at risk of fraud. JPMorgan Chase was also hacked during 2015 in what may be part of the 'largest US bank breach ever,' according to the US attorney's office. And this is after 500 million financial records were stolen overall in 2014.

Nick Mothershaw, UK&I director of identity and fraud at Experian, thought that 2015 was bad for fraud. He said: "We've seen ID fraud attempts soar this year, led primarily by current account fraud, which gives IS thieves a stepping stone to a wider range of financial products.

"The brunt of recent increases in fraud has been felt by older members of society, who often have a good credit rating and have lived at the same address for a long time. They now account for one in twenty detected current account frauds in the UK."

Anthony Duffy, director of retail banking at Fujitsu, expects this issue to enter the limelight in 2016.

He said: "I anticipate continued focus around security. I fully expect this to remain a hot topic throughout the new year. Recent data breaches have highlighted how vulnerable some organisations are to cyber-crime. The consequences of such breaches can be significant for customers and institutions alike – financial loss, reputational damage and an adverse impact on the company share price might all be expected.

"The fact that hackers only have to get lucky once, while banks have to remain vigilant and ahead of all the criminals all of the time, means that this will remain a key area of management focus in 2016 (and for years to come)."

David Gibson, vice president of strategy and market development at Varonis, believed that the situation will worsen before it improves.

He told *EPI*: "The Identity Theft Resource Centre (ITRC) reports a total of 641 data breaches recorded publicly in 2015 through November 3. Most organisations know this number represents the tip of the iceberg. The frequency of known data breaches will increase in 2016, due not only to increasing privacy and breach disclosure laws, but also the increasing failure of traditional perimeter-focused security investments to protect valuable data.

"Employees' use of mobile devices and companies' migration of IT workloads to the cloud will also contribute to a sharp rise in breaches. Over time, this should help to shift priorities towards investing in more proactive data-centric protection, but it is likely things will become worse before they get better."

Gibson added: "In recent years, we have seen the careers of several top executives suffer in the wake of cyberattacks. This will accelerate in 2016. Blame for data breaches is shifting from IT to the C-suit.

"Data impacts every facet of an organisation. If management is not investing in and focusing heavily on securing data and its use, it is now understood that they are putting the entire company and its stakeholders at risk."

Narayan Sivaram, vice-president and regional head of cards and payments at Infosys, believes a way to alleviate security concerns is cashless payment technology.

He commented: "In 2016, security and trust will be high on the agenda for payment providers. As providers seek to fulfil their objective of gaining new customers in 2016, they will also invest in fraud prevention. This will be especially important as contactless payments can leave users open to fraud.

"Therefore in 2016, it will be important for providers to secure customer trust by investing in technologies which protect them from losing money to fraudsters."

Dan Salmons, managing director of PayPoint Mobile and Online, takes an alternative view that security is not a huge deciding factor for consumers.

He said: "Will security become a new differentiator for brands? I'm not so sure; I think people view it as a 'hygiene factor' they can take for granted. But, building that trust with consumers will undoubtedly require merchants to depend on their PSP as an expert adviser on payments security and compliance, as much as a technology provider." ■

Going for broke: Asia's cashless initiatives

Diversity in Asia presents both opportunities and challenges when implementing cashless initiatives across certain areas of the region. How is Asia faring on this front and what are the obstacles? **Xiou Ann Lim** takes a look at Singapore, Malaysia and India – and what makes each market unique

A number of hawker centres in Singapore's suburbs – which are purportedly the final frontier of the cashless payments space in the country – started accepting non-cash payments as far back as July last year.

Despite this apparent progress, there are still a few international food outlets in the heart of Singapore's business district that have put up adamant 'cash only' signs at their payment counters. Such is the disparity in adopting the city state's cashless initiatives and this contrast is a microcosm of the general state of affairs in Asia.

Embracing cashless

Singapore's history in promoting cashless transactions goes as far back as 1985, when the National Campaign to Minimise Cash Transactions was launched to promote electronic transactions.

This was due, in large part, to the estimated $24.5m that the government could save in manpower costs if cash transactions were reduced. That same year, the Network for Electronic Transfers (NETS) was also established and it is recognised as a national payment system by the Monetary Authority of Singapore (MAS). Today, it remains one of the key drivers for Singapore's cashless initiatives.

Malaysia introduced its answer to NETS in the form of the Malaysian Electronic Payment System (MEPS) in 1999 as part of the nation's cashless initiative. More recent steps to drive this agenda forward include the Malaysian central bank's Payment Card Reform Framework, which aims to ensure fair and reasonable cost of accepting payment cards. The framework also imposes ceilings on interchange fees that acquiring banks pay to card-issuing banks.

Analyst at CIMB Research Mohd Shanaz Noor Azam says that this initiative is spurred by the increase in cash-handling costs, which amounts to more than MYR500m ($115m) a year. He says that about 90% of transactions in Malaysia are still conducted in cash and that the central bank is targeting to reduce this to 60% by 2020. To support this, the country aims to increase the number of point-of-sale (POS) terminals from 240,000 to 800,000 units by 2020.

Another Asian market where cash remains king is India. To encourage an increase in electronic payments, the Indian government proposed measures such as awarding tax benefits to merchants who have at least half of their transactions conducted electronically.

Apart from the merchants, consumers would also benefit in that they could collect income tax rebates if a certain proportion of their expenditure were cashless. These measures are meant to improve financial inclusion, reduce the risks and costs of handling cash as well as increase transparency.

Asia in numbers

According to data from the Cards & Payments Intelligence Centre, Singapore is leading the way in the volume of cashless transactions per capita among the three countries – with an average of 124 cashless transactions per person in 2014.

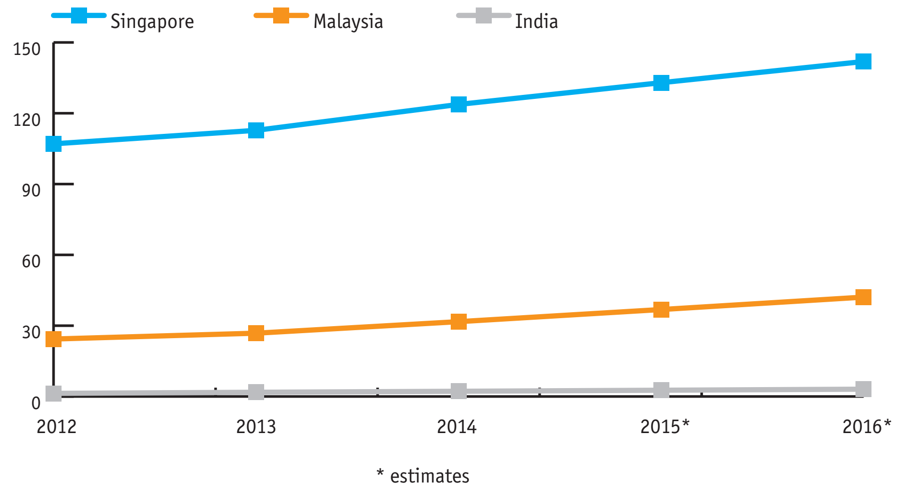
"Singapore is leading the mobile wallet space in the ASEAN region," says Leslie Choo, ACI Worldwide's vice president of ASEAN & Greater China. "If you compare it to China – where cashless transactions largely happen online – retailers in Singapore are readier than those in China to push forth

MAIN REASONS FOR ASIA-PACIFIC CONSUMERS TO USE MOBILE PAYMENTS (%)

Time and cost-saving	83
Ease of use	79
Preference for cashless	62
Round-the-clock access	52

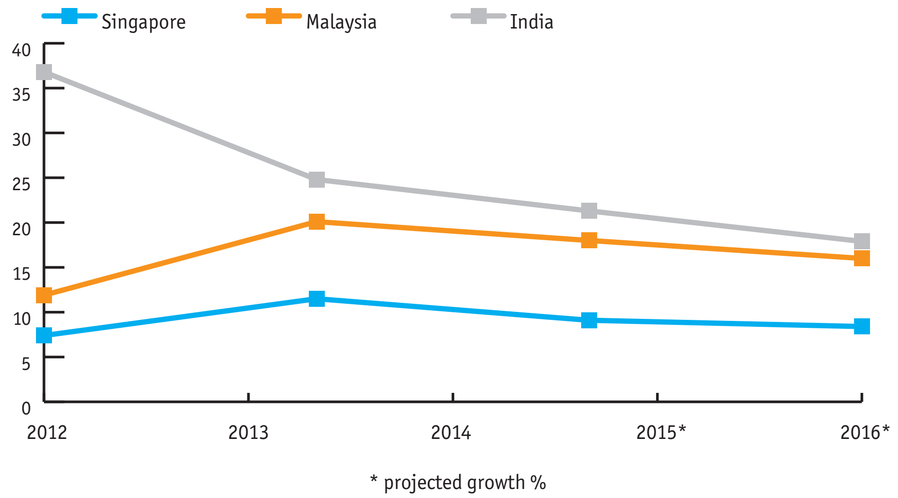
Source: Cards & Payments Intelligence Centre

NUMBER OF CASHLESS TRANSACTIONS PER PERSON



Source: Cards & Payments Intelligence Centre

GROWTH IN TOTAL VOLUME OF CASHLESS TRANSACTIONS (%)



Source: Cards & Payments Intelligence Centre

the cashless initiative," he observes.

On the other hand, Malaysia saw an average of 32 cashless transactions per person in 2014. "Given that customers in Malaysia strongly trust the e-commerce space, Malaysia might be the first among the emerging markets in Asia to successfully achieve the status of a cashless society," Choo says. He also notes that the market is strong in terms of mobile wallet adoption and usage.

Despite the deceptively promising total number of cashless transactions a year in India – which runs into billions – the penetration rate is actually still pretty low. As seen in Figure 1, the country saw only two cashless transactions per capita in 2014. This indicates that while India's volume of cashless transactions may be helped along by its sheer population, the actual adoption rate isn't very high.

India, Malaysia and Singapore continue to witness year-on-year growth in the cashless payments space. When it comes to the percentage of growth in total volume of transactions, India saw a significant improvement in 2013 at 36.8%. However, this slowed slightly in 2014 to 24.8%.

Meanwhile, Malaysia and Singapore both saw accelerated growth from 2013 to 2014 – with 11.9% to 20.1% and 7.4% to 11.5% respectively.

However, this exponential growth may not be sustainable in the long term. According to the Cards & Payments Intelligence Centre, the total volume of cashless transactions in all three countries will continue to grow in the following years – albeit at a slower pace.

Challenges

Although there appears to be considerable progress within the cashless payments space in Asia, its journey towards being a cash-free society is hampered by urban-rural divide as well as large pockets of the unbanked.

Apart from these geographical and socio-economic challenges, small- and medium-sized enterprises in suburban and rural areas are also still somewhat sceptical about the fee that they have to cough up for each card-based transaction – according to Shanaz.

"Education on the merchants' and consumers' parts are still lacking," he says.

Shanaz points out that another challenge – and one that is unique to Malaysia – is the country's history of widespread credit card fraud, which has caused distrust among consumers. He explains that this was why Malaysia was one of the first South East Asian countries to adopt smart chips in their cards as opposed to retaining the use of magnetic strips.

Choo also cites consumers' distrust in the system as a hurdle that needs to be overcome: "For some Asian consumers, holding on to a large amount of cash feels more secure than keeping that same amount in a mobile wallet." But he believes that this can be improved by creating more awareness among consumers on the benefits of going cashless and by getting them into the habit of using cashless modes of payment.

But Choo is optimistic: "I think we can clear these hurdles over time. I'm not saying that it will be easy. But we are already consolidating so many of functions into a single device. So, I think mobile wallets will definitely take off. Perhaps our smartphones will be the only item we will need to carry around with us in the future." ■

What can we expect from 2016?

Electronic Payments International approached experts in the payments field to see what trend will take the New Year by storm. What from 2015 will carry onto the next year? What new developments are on their way? Is 2016 the year that digital finally plants its flag on the payments industry?

BETHAN COWPER, HEAD OF MARKETING AND PR AT COMPASS PLUS

2016: the year that digital takes the payments crown

Predicting the future of the payments industry a year at a time has never been that challenging in the past, though some payment experts might argue otherwise. Payments generally isn't a fast moving space, new ideas are generated quickly, however adoption comes at a much slower rate. For example, mobile payments have been around a long time; since Coca-Cola introduced vending machines that could accept mobile SMS payments in 1997, contactless payments have been offered by a number of global giants since 2008, and NFC has had a much more volatile journey approved as an ISO/IEC standard in 2003, with its success completely dependent on the support of hardware device manufacturers.

The difference between 2016 and previous years is that now need, technology and adoption are ready to converge; not only is the industry ready, but financial institutions, merchants and consumers are finally getting on board as well. Whilst there might be discrepancies in behaviour between demographics and culture, consumers are increasingly aware and more accepting of the digital age, which is now poised on the cusp of stepping out of the niche and into the mainstream.

The Nordics are leading the way in the race towards cashless societies, with the Danish government recently proposing that retailers should no longer be obligated to accept cash payments, and Sweden severely reducing the amount of cash in circulation. The rest of the globe is not quite as prepared to support the demise of cash, however, 2015 was the year that digital payments finally eclipsed cash in the UK and in the US non-cash payments are set to grow exponentially, fuelled by economic recovery.

The dawn of the mainstream digital age is by no means exclusive to the more developed regions of the world. On the contrary, many global innovations are being led by emerging markets, born out of a combination of necessity and government initiatives. Stepping aside from our favourite case study of mobile payments in Kenya, Nigeria has introduced a contactless, prepaid, and biometric national identity card to combat financial inclusion, whilst Brazil is pushing both mobile and contactless in the run up to the 2016 Olympic Games. Zimbabwe, Mexico, Bangladesh and the Philippines are making substantial headway with P2P payments, and according to The Mobile Consumer, more consumers in Asia Pacific use their mobile to buy goods and services than any other region in the world (at 46%) and in China there are three times more mobile phones than there are bank cards.

With the correct groundwork in place, 2016 looks set to become the year the predictions the industry has been making around contactless, mobile and even biometrics evolving out of the niche finally come into fruition, geography depending. Not at the expense of the death of cash however; the availability and increasing popularity of the digital channels on offer provide options not replacement. Cash is a very culturally important channel within the payments ecosystem; not to be ignored or underestimated. Different regions show a distinct preference for cash based on traditions and customs that define them, for example, the ability to barter. The Middle East is not suddenly going to move away from cash on delivery in 2016, however, the options available mean that consumers in this region can now explore other avenues such as mobile or the prepaid cards and merchants can incentivise this behaviour.

In the UK, 2016 looks set to be the year of the contactless card, whilst Japan looks to continue the growth of biometric authentication at the ATM. In the US, the debit card market is predicted to take off as FIs become more rate-sensitive, and cash use will continue to decline in Belgium, France and Canada. It is possibly the most exciting time in payments since the introduction of the payment card, and this is without delving into the ongoing technical developments into payments security and open development platforms. In short, 2016 will be the year that digital wears the payments crown.

LIAM LANNON, PAYMENTS TRANSFORMATION CONSULTANT, SOPRA STERIA

Payments Industry –2015 Highlights and 2016 Trends

It's the season when people look back over the year just passed - the good and the bad - and also start thinking ahead to what the next year holds for them: their hopes, expectations and fears. The retail payments industry in the UK has similarly seen a year of highs and lows and the industry can look forward with hope and high expectations - if not a little fear - to 2016.

Firstly, the highs of 2015 - it was all about xPay: after a year or so of hype, Apple Pay finally launched in the UK on 14 July, to a mixed response. While Apple 'fanboys' and 'fangirls' were eager to embrace this 'new way to pay', some of the UK's leading issuers - HSBC, Lloyds Bank, Halifax, Bank of Scotland and TSB – didn't queue to join up on Day One.

Nonetheless, HSBC and First Direct were only a little late, announcing the launch of their support for the mobile payment product on 28 July, with Lloyds and HBOS joining on 28 September, and TSB on 17 November. The stand-out omission is Barclays who have announced their intention to join but who so far have been focused on promoting their bPay wearable products instead.

And the verdict? Statistics are hard to come by but feedback so far has been broadly positive, with 51% of Apple Pay users who were surveyed saying they are extremely satisfied with the service and 40% of those who have an Apple device confirming that they have used Apple Pay to pay for goods and services. Contrast this, however, with the 75% who have yet to see Apple Pay pay points or symbols and it is clear that overall customer awareness of the product still has a long way to go . Generally, the news is good for Apple with Apple Pay performing well in most environments, the London Underground being a notable exception, where commuters are sometimes frustrated by having to wait while an "Apple Payer" tries to use his iPhone or Apple Watch to negotiate his entry to the Tube system.

What? I hear you say. Apple Watch? Yes, the Apple Watch debuted on 10 April with limited stock available soon after. When Apple Pay was launched in July, watch-based payments became a reality for Apple Watch owners, and independent research published in August by Wristly revealed that 80% of Apple Watch owners had used Apple Pay to pay for goods and services .

While these statistics are impressive, it must be noted that even a large percentage of Apple Watch and iPhone 6 "Apple Payers" still only represents a very small number of consumers. The payment system may never reach the same level of ubiquity as contactless cards, even if over time the majority of iPhones in the UK market eventually become Apple Pay-compatible, so should we be making such a fuss about it all? Well, yes and no.

On the one hand, it's only another way to pay, competing with the aforementioned contactless cards as well as chip and PIN cards, Oyster cards and good old-fashioned cash. However, it does promise a future where all you need to take with you when you leave home is your smartphone, certainly if your day will involve a retail payment or two - and perhaps even a Tube ride.

Overall, the arrival of Apple Pay heralds a new dawn for mobile contactless payments and allows users to load their own (participating) bank cards directly into the iPhone Wallet via a very straightforward registration process: as such, it can be seen as a user-friendly success.

Of course, 2015 wasn't all about Apple Pay: other newcomers have thrown their hats into the mobile payments ring in 2015, notably Samsung Pay and Android Pay. While Samsung Pay has already launched in South Korea to some success (and confirmed a US launch in October 2015) and Android Pay is live across the US, neither of these two solutions has so far confirmed a UK launch date, even for 2016. At this stage, therefore, it is difficult to make any comparisons between these two planned implementations and the live Apple Pay product.

So what about the lows of 2015? EE have decided to close Cash on Tap to any new subscribers, suggesting that it may be the end for one of the more successful mobile contactless payment solutions to hit the streets in the UK. That it took Apple a number of months to launch in the UK after its successful debut in the US in 2014 was also a disappointment, although much of that could be down to the UK issuers negotiating with Apple over the distribution of interchange fees for Apple Pay transactions at point of sale. Perhaps the greatest disappointment of 2015 is that, despite the fairly extensive coverage of contactless terminals across the UK, there has not been the level of mobile contactless payment solutions (either NFC-based or HCE-based) which the analysts have been forecasting for a number of years.

With the likely arrival of Samsung Pay and Android Pay to the UK next year, perhaps 2016 will see a burgeoning demand for mobile payments and a significant spike in activity, encouraged by the increase in the contactless payment limit to £30 and a significantly larger pool of compatible smartphones - Apple, Samsung, LG and others. LG have even announced the launch of their own mobile payment system for the South Korean market, but there's no news on when (or if) that system will be rolled out across Europe or the US. Dare I mention that the UK market is still waiting for the arrival of Zapp mobile payments? This payment solution, supported by VocaLink and based on the Faster Payments Service, as opposed to the card-based solution which the 'xPay' solutions have adopted, has seen launch dates come and go.

Maybe 2016 will be the year where everything falls into place and the market will be flooded with mobile payment products. We can only hope.

STUART LACEY, CEO AND FOUNDER OF TRUNOMI

2016: Time to comply with Data Privacy law

2015 bore witness to a huge disruption in financial services, with a range of fintech companies coming to the fore. Advances in customer-led financial technology have led to increased industry transparency, empowering consumers.

Trunomi's platform is a good example of this movement, giving end users a way to share their personal data with informed consent, while providing financial institutions with the framework to handle and process this data securely.

This comes at an opportune time for financial institutions, whose new year resolutions need to include an overhaul in how they acquire and manage customer data, due to incoming legislation.

In 2016, the European Union has resolved to unify customer data laws with the EU General Data Protection Regulation (GDPR), which was approved in December 2015. This legislation, to be fully ratified in 2016, controls the security and management of customer data, putting the power of back into the hands of consumers themselves. It has significant ramifications for the financial services sector, who will need to seek a solution this year in order to meet a 2017 deadline.

Globally, the financial world is experiencing a compelling convergence of regulatory risk, governmental policy, consumer awareness and technological innovation.

Financial institutions must rethink how they manage, store and share customer data in 2016, implementing more rigorous and auditable KYC and customer data management processes.

With advent of GDPR, supporting customers' digital rights management for personal data will become mandatory, which is why we have created a platform that enables banks to connect to their customers with a customer-driven data sharing platform.

I believe this trend of transparency and personal data control will define 2016, fundamentally shifting the power dynamic between financial institutions and their customers. ■

YellowPepper focuses on Latin American mobile payments market

Latin American mobile banking services pioneer YellowPepper has reinvented itself as a provider of mobile payments platforms in the region, **Robin Arnfield** reports. The move reflects the rapid growth of smartphone penetration in Latin America and the opportunities this provides to banks and retailers

Privately-owned YellowPepper was founded in 2004 to provide value-added services for US cellphone users. In 2007, the Miami, Florida-based company decided to focus exclusively on the Latin America and Caribbean mobile financial services market, offering mobile banking services to banked and unbanked consumers through partnerships with local banks, telcos and cash-in/cash-out agent networks.

In 2010, YellowPepper became the recipient of the World Bank-owned International Finance Corporation's (IFC) first equity investment in a Latin America mobile financial services company. As of December 2015, YellowPepper has raised $39m from five investors.

In June 2015, YellowPepper appointed mobile payments industry pioneer Mohammad Khan as chairman of its board. Khan is former president and founder of ViVOtech, an NFC technology company that helped paved the way for mobile payments.

Refocus

YellowPepper received a lot of kudos for providing the underlying software for Haiti's TchoTcho Mobile money service, which was launched in 2010 by mobile telco Digicel and Canada's Scotiabank and funded by USAID and the Bill and Melinda Gates Foundation. It also helped set up mobile money services in the Dominican Republic, Mexico and Peru.

However, YellowPepper found the cost of operating mobile money services for the unbanked was too high for the volume of revenues it received. So, for the time being, it has stopped providing services to that segment, no longer has agent networks, and isn't working with Digicel.

"Although YellowPepper has pulled out of the unbanked mobile money business, it will offer services to the unbanked if banks are willing to pay properly for these services," says Jeffrey Bower, Digital Finance Specialist at the UNCDF's (United Nations Capital Development Fund) Better Than Cash Alliance.

"We now focus on banked customers," says YellowPepper's CEO Serge Elkiner. "At the beginning of 2013, we did an in-depth analysis of our market, our financial results, the positioning of the banks, and the future of mobile in the region. We decided we had done well with our mobile banking product for banked consumers."

In early 2013, YellowPepper had 3.5 million users and were processing 200 million mobile banking transactions a year. "We now have nearly 5.5 million users, and are processing over 400 million banking transactions a year," says Elkiner. "But providing banking services to the unbanked wasn't paying enough for us to survive, so for the time being we've left that market."

Currently, YellowPepper offers its mobile banking platform on a white-label basis in partnership with local banks in Colombia, Ecuador, Mexico and Peru. Its mobile banking software, which is available as a mobile app and via SMS and USSD (Unstructured Supplementary Service Data), enables customers to check balances, pay bills, send money and perform cardless ATM withdrawals instantly.

Banking partners include Scotiabank, Grupo Aval, Banamex, Banco Pichincha, Banco Davivienda and BCP.

Trends

Elkiner identifies two major trends in Latin America. "We see bancarisation happening at the speed and investment priority determined by local banks and pushed by government policies and regulations," he says. "For example, the banks in Peru have come together to develop a national mobile banking platform for the unbanked called Bim (Billetera móvil/mobile wallet), but it has taken them four years to do this. Setting up services for the unbanked takes time."

"According to Mercator Advisory Group estimates, in 2013 there were approximately 170 million unbanked or underbanked adults in South America," says Tristan Hugo-Webb, associate director of US-based Mercator's International Advisory Service. "The migration of 170 million individuals into the electronic payments mainstream won't occur overnight and will be a long and somewhat arduous task."

The other key trend is the very rapid growth of smartphones in the region, which offers the potential for point-of-sale mobile payments, Elkiner says.

"We have bank clients that have trusted us for the last six to seven years, and they were asking us what the next innovation is that they can get into," Elkiner says. "So initially we considered using our mobile banking app to provide a bridge from banking into mobile payments. We then realised we needed to develop a stand-alone app for payments which wasn't an extension of our banking app, and which would be offered either under the brand of a single bank or a group of banks or under our own brand. Our mission is to make mobile payments a reality in Latin America, so we don't mind if banks push their own brand on our platform or whether they use our brand."

Yepex Smart Wallet

YellowPepper has developed the Yepex Smart Wallet mobile payment app and platform which offers similar functionality to Apple Wallet and which it describes as technology-agnostic.

"We don't believe any one technology will fulfill every single use case or consumer demand," Elkiner says. "For example, if you don't have an iPhone 6, you can't do Apple Pay, as you don't have NFC on your phone. If you have an iPhone 5, you can't do NFC, but you could pay via Bluetooth or by QR code or generate a one-time token."

YellowPepper provides a SDK (software development toolkit) for banks that want to integrate their own white-label system with the YellowPepper mobile payment platform. Alternatively, banks can offer Yepex to their customers.

Yepex is capable of supporting NFC payments using HCE (Host Card Emulation); Bluetooth Low Energy (BLE) payments via BLE beacons; QR codes; and six-digit one-time passcodes that are generated on the user's phone and manually entered into a POS terminal. Yepex can also be used for cardless ATM withdrawals.

"All our different implementations of our platform – NFC, QR codes, BLE and one-time passcodes - use tokenisation, where card numbers are turned into security tokens which are only valid for one transaction," says Elkiner. "Only the form of the token differs between the implementations. So far, the mobile payment platforms we have rolled out in Colombia and Ecuador only use one-time passcodes."

HCE technology enables an NFC-enabled smartphone to make secure, contactless card transactions without the need to store card data in a hardware Secure Element. "Our HCE implementation use the major card schemes' tokenisation technology," says Elkiner.

"We tell banks that, before deciding to do HCE-NFC mobile payments, they need to know what percentage of their customers have NFC-enabled phones and they need to have a strategy for enabling retailers for NFC payments," says Elkiner. "In the US, less than one percent of transactions at POS are NFC. If you only have a low number of customers with NFC-enabled phones, then it isn't worthwhile going with NFC and you can reach a lot more merchants and consumers if you use a solution like one-time-passcodes."

The advantage of one-time-passcodes is that no additional hardware is needed at the POS.

Loyalty/rewards

YellowPepper says Yepex integrates with loyalty and reward programmes and gives users exclusive access to promotions and discounts,

"YellowPepper layers mobile payments over loyalty and rewards on behalf of key merchants for existing banked customers," Better than Cash's Bower says. "The company works closely with its clients to enable them to access a level of customer information they couldn't access on their own. Banks, merchants and marketers get a level of unprecedented access through YellowPepper's services."

Partnerships

At the end of 2014, YellowPepper announced it had formed partnerships with Colombian processor CredibanCo and Mexican processor eGlobal to roll out its mobile payment platform to local banks in Colombia and Mexico respectively.

"In Mexico, we brand our mobile payment app as Yepex, and in Colombia it is called Smart Wallet," says Elkiner.

In September 2015, YellowPepper launched Smart Wallet in Colombia in partnership with Citibank and Banco Davivienda, and is currently adding more bank partners. It also launched a white-label version of Smart Wallet called AvalPay in partnership with Colombia's Grupo Aval and CredibanCo.

Grupo Aval, the largest financial services group in Colombia, owns Banco de Bogota, Banco de Occidente, Banco Popular and Banco AV Villas. The goal is to make Aval Pay available to 60,000 POS terminals in 20,000 retail locations in Colombia.

In November 2015, YellowPepper launched PayClub, which is based on Yepex, in Ecuador in partnership with Diners Club of Ecuador, the largest credit card issuer in the country. Diners Club of Ecuador has an estimated 600,000 active credit cards and over 450,000 clients.

"Diners Club of Ecuador is part of Grupo Pichincha, which is the largest bank in Ecuador and issues Visa, MasterCard, Diners and Discover cards," says Elkiner. "Also, through its processor, Diners Club of Ecuador issues Visa and MasterCard itself."

PayClub lets users make mobile payments with their Diners and Discover cards and Visa Interdin (Visa brand) cards. They can also view promotions, locate them on a map inside the app and receive notifications as well as view their transaction history and manage their cards.

Adoption

In Colombia, YellowPepper and its partners signed up 45,000 users in the first two months from the September 2015 launch. "We've succeeded as people find the system easy to use and very fast," Elkiner says. "McDonalds Colombia accounts for 55% of our Colombian transactions, as they did a big promotion. You get two McDonalds combos for the price of one if you use the YellowPepper wallet. But if you pay with plastic cards or cash you get one combo."

While not disclosing actual user figures for Ecuador, Elkiner said that there had been a very good response in the first 10 days since launch in that country. "We had a very high percentage of new users registering their credit cards with us, which contrasts with Apple Pay's US rollout, where only 12-15% of people downloading Apple Pay have registered their cards."

"The biggest use case we have in Ecuador is for home delivery services," says Elkiner. "In Ecuador, McDonalds, pizza takeout firms and pharmacies are using our platform for home delivery. When you phone in your order, instead of taking the security risk of giving your credit card number, expiry date and CVC code, you just give the six-digit passcode generated by your YellowPepper wallet. The passcode is only valid for one transaction for a few minutes."

In Mexico, YellowPepper now has 6,000 POS terminals enabled to accept Yepex payments "We are now in beta trial stage in Mexico and plan to do the official commercial launch in Mexico in Q1 2016," Elkiner says.

Success factors

"Several factors have been important for the success we've seen with the launches we did in September and November 2015," says Elkiner. "Firstly, we work with the banks to build the ecosystem needed for success in mobile payments. For example, we are integrated with the local processors and we set up infrastructure at these processors. Also, we integrate with the local POS system used by the merchants."

Elkiner says that, in YellowPepper's business model, there is no extra fee to the merchant for accepting YellowPepper mobile payments. "The merchant fee doesn't change with a YellowPepper mobile payment transaction, as we charge the same as for standard credit and debit cards," he says. "Our competitors who are offering closed-loop mobile payments in Latin America charge an extra fee over and above what merchants pay for accepting standard credit and debit cards."

Because YellowPepper is integrated with the local processor, merchants receive YellowPepper transaction information in the same file as their traditional credit and debit card payments. "We use the same clearing and settlement as for existing card payments," says Elkiner. "As the merchant gets one file from the processor showing which transactions were mobile-initiated and which involved plastic cards, there are no operational and technology changes for the merchant. All they have to do is to train their staff to accept mobile payments from customers."

The opportunity for growth in Latin America is huge for a company like YellowPepper, Bower says. "It has developed a business of working with the emerging middle class, which has been growing exponentially over the past decade," he says. "As these customers expect more and more from their digital services providers, YellowPepper will play an increasingly important role in providing digital services at the point of sale.

"YellowPepper's new focus on mobile purchases and loyalty has resulted in higher revenues and the development of a digital customer engagement process, leading to higher user by customers across key merchants in Latin America. Right now, YellowPepper is leading in the specific niche it has created for itself." ■

"We have only seen about 5-10% of what digital banking can actually be"

The final Digital Banking Club debate of 2015, hosted in London, featured panellists from both established and challenger banks, as they discussed where digital would take the financial sector and if institutions are doing enough to realise fully digital's potential. **Alexander Atkins** writes

The Digital Banking Club's final debate of the year saw a wide variety of answers and opinions to the major question that is circulating the financial world today of 'How far will digital go?'

A recent report by McKinsey reported that only 20 to 40% of customer experience has been digitised by retail banks suggesting that the established banks still have a long way to go in terms of digitisation, and are begging the question of where the opportunity for growth will come from.

Simon Cadbury, Director of Strategy and Innovation at Intelligent Environments, was quick to agree with the statement that digital adoption still has a long way to go, stating that in the last twelve months, only one quarter of all current accounts taken out have been taken out through digital channels. He further stated that 58-62% of people are now managing their accounts as an individual digitally, whilst only 30% of the UK has adopted mobile banking.

In terms of the opportunities from digital growth he said: "We've seen a lot of interest in mortgages, in self-serving mortgages, lots of interest in areas that have been untouched so far, such as vehicle and asset finance, insurance and private wealth."

Digitisation vs being natively digital

As to how this digital disruption would change the traditional banks, Alessandro Hatami, an advisory board member at Advanced Payment Solutions, believed that there is going to be a profound change in how banks would look in the future because of changing customer adoption.

"Customers feel increasingly comfortable in accessing financial services through these digital devices and people in this country are extremely supportive of digital as a means of engaging with banks," he said.

"But what must be asked now is if I was to build a bank today, would I design it as a traditional bank but in a digital way or design something that's completely different? What a challenger bank can bring to the table is addressing customer's three basic needs which are that they need to pay someone, they need to borrow something or they have too much and want to protect it," he added.

This comes after Anthony Thomson, the co-founder of Atom and Metro Bank, released a forecast stating that in two or three years, the established players may not exist in the same way as we recognise them now.

Tom Blomfield, CEO and founder of challenger digital bank Mondo, was of the same opinion. "I totally agree. I think the really interesting future of banking is about data and identity," said Blomfield.

"But I think within that digital space, you've got talk of digitisation versus being natively digital and that's really important because some digitisation of processes only means you take one or two steps forward. But having to fundamentally rethink what banking is and then build from the ground

upwards - that is the real challenge."

As to what this new bank should be offering, Blomfield agreed that simplicity was key: "By offering a very simple service that you can sign up to quickly, store your money, pay people, pay bills, pay friends, that's all it is."

The right time for challengers

With new challenger banks appearing more often now, the question over timing for new entrants was raised.

Chris Gledhill, CEO and founder of digital challenger Secco Bank, thought that the timing for new challengers to enter the market was almost perfect.

"We've got a progressive regulator, we've got London which is the fintech ground zero and we've got a load of very good start-up technology," he said.

But Gledhill was quick to differentiate between challengers following traditional methods and challengers doing completely new things.

He said: "There are plenty of challenger banks but from our point of view they are not really challenger banks, they're like start-up banks doing the same thing as traditional players, just in a more agile way."

Outgoing head of group innovation at Nationwide, Daryl Wilkinson, also believed now is an exciting time for challengers. He justified the reasons for his setting up Lab12 Innovation, explaining that current banks and challengers had approached him for help.

"A number of current banks came to us asking how they should translate their physical branches into online and mobile. And a few challengers also needed help with scale, structure, talking to the regulator and we realised there's a lot of opportunities here," he explained.

From another perspective, digitisation cannot be limited to specific sectors of the financial industry as Rhys Berry, director of collections technology and operations for Santander, explained. He stated that the collections industry had experienced little digital change in the last twenty years and was still going through the same processes, trying to replace systems that worked well in 1997.

He added: "The other challenge with collections is regulatory change and how to digitise a process when the regulator is redefining what that process is, it's a practical issue."

The role of branches

The question of what role branches will play in the future of banking has been asked frequently and was sure to come up.

Wilkinson was quick to challenge the idea that branches are dead and have no role to play any longer. "They serve a purpose, they are converting people, and they're an educational resource," he said.

"So it's not about should we have them or not. You've got them, so how can we utilise them better and the first thing to do is to stop thinking about them as branches," he added.

Hatami, however, was sceptical that banks would see past the bottom line to make the transition within branches.

Hatami said: "It's about how you build transition, because transition requires investment and a rethinking of the way you do business and looking at banks today, do they have the appetite to make that transition when they are doing alright now?"

The focus on branches also put the spotlight on the two challenger speakers, Gledhill and Blomfield, digital challengers with little apparent need for branches.

Blomfield asserted that the majority of Mondo's customers wouldn't need to access a branch, but for that 'one in 1,000 customers who has a cheque from their granny and needs somewhere to put it, we have a box somewhere that you can put that cheque in'.

Gledhill stated that Secco wouldn't have a physical channel in the traditional sense. "In Secco, the customer's smartphone is essentially their bank," he said. "They can just as easily become an ATM to other customers just walking around."

Asked whether they felt that some sort of human contact was needed, Blomfield conceded that there certainly is still a need for it, but that it is done in the wrong way.

"Being able to talk to someone is very important but you can provide that without a branch. Often you go into branches to talk to someone about a specific product and they say you can use the phone over there, and this is a result of banks being complacent because historically they've never been challenged," he said.

He continued to talk about how most processes didn't need human contact but were made complicated through digitising the traditional processes, such as account opening, which he asserted should take thirty seconds and could be done not in-branch, but on the smartphone.

Blomfield brought up a useful example of Blockbuster versus Netflix. "Blockbuster had a huge market share and loads of branches and when the internet came along, its version of digitising was to post people their DVDs. Meanwhile, Netflix came along as a truly digital business and took most of the market," he explained.

"It's figuring out what a branch should be there for and what services do our customers want and then asking what is that transaction going to look like and how do we get there?" said Berry, reiterating the point that branches needed to evolve.

Blomfield, continuing on the theme of the simplicity a digital bank could offer said: "I feel like we've only seen 5-10% of what digital banking can really be. Right now it's a statement with a list of transactions that's two days out of date on your mobile, but that's not mobile banking, that is your statement on a mobile. There is ten times more we can do with data functionality."

Use of cash and Apple Pay

The debate then turned to whether the big banks and challengers could team up to tackle this digital future. Whilst Blomfield was adamant that a challenger should aim to stay away from the reputation associated with big banks and 'turn down the offer', Hatami offered a different view.

He said: "There's nothing wrong with a big bank buying a start-up. All they are doing is adapting their business model and making investments in the ideas of the smaller challengers so that if they succeed then they have their beta bank."

Gledhill did not seem hostile to the idea but pointed out the danger of non-banking players using challengers as a way of getting their foot in the door.

The subject of the role of non-banking players in innovating inevitably led to Apple Pay and what it has brought to the table. Cadbury was quick to state that the stats show it still has some way to go.

"Apple Pay adoption in the US is at 1.6% and it's a great sign of where things are going, but it comes back to the issue of cash," he said.

He added: "Cash still represents 60% of transactions in the UK and I suppose the thing for the start-ups is that every time a customer needs an ATM, they are going to incur an ATM fee of whatever amount of pence just for a cash withdrawal.

"We've got other banks here such as Bank of Ireland or Sainsbury's Bank and one of their biggest revenue streams is their ATM network."

However, Blomfield asserted that, despite the continuing high use of cash, Apple Pay had begun a process that could lead to digital payments, something that would add to the strength of digital-only challengers.

"The main challenge to going cardless is that you have to get the merchants to adopt it as well as the customer. You need very high adoption rates to achieve success and I think Apple is one of the few companies in the world who can achieve that," he argued.

Few seemed to doubt that Apple Pay was a serious disruptor and that a key strength lay in being a non-banker as Hatami argued: "The other thing about Apple Pay is that it does not care about financial services. It just wants to sell products."

Regulator: help or hindrance

The debate then moved onto the role of the regulator and whether they had been a help or a hindrance in digitising banking.

Blomfield held the view that there had definitely been improvements.

He said: "The number of new challengers in this market is growing, so there has been some movement. I think that they are worried about the possibility of a new challenger failing on their watch but I think we need to accept the possibility of some new banks failing to really push innovation further.

"Ultimately, the net result will be beneficial for customers because you try lots of different business models, and while many fail, a few succeed."

Wilkinson agreed with this, and stated he believed they were beginning to understand their changing role.

"I think the regulators help in hindering the potential for poor business models to emerge under their watch that impact innovation in a different way.

"But I think they have recognised that they are hindering and the conversation they need to have now is about how they can improve and disseminate their support better," he said.

However, Hatami reminded everyone what the actual role of the regulator is and why they exist.

He said: "We must not forget that these guys are there to protect the financial well-being of the whole population and if they get it wrong, the cost is not just a few pennies, you might lose your livelihood, your savings, so they have to be very strict."

Rhys Berry concurred with this, talking about how the regulator was going through a lot of challenges trying to keep up with such a changing industry and, at the same, was consistently under pressure to both help and protect the industry.

However, he believed that it will only be a matter of time until the regulator can get comfortable with business models that fintech start-ups are bringing to the market.

Finally, the question of where digital would be in ten years was put to the panel.

Simon Cadbury believed that the 50s relationship model of banking where the banker knew the customer personally and anticipated their needs will be gone but replaced in a digital way so that technology will help people to understand the vision of what one's needs are, underpinned by the ability to make contact digitally.

He added: "I think people won't be going into branches, it will be fully digital, but I do think some form of the human element will remain."

Hatami focused on how data would bring the customer and the bank closer together so that they would both know much more about each other and stated: "I see a future where banking is a service that is an extension of me through whatever means I choose at that point in time"

Gledhill concurred on the importance of data: "People will start to realise the value of their data and they'll start using banking to invest their data. We'll start to see people realising the value of their information."

"I think digital will go all the way" asserted Blomfield, stating that the process of digitising would kill the incumbent banks.

Furthermore, he believed that data would be the key to providing a digital relationship with the customer that covered all their needs.

"I think we have only seen about 10% of what is possible with data usage," he said.

Daryl Wilkinson was in partial agreement believing that digital would kill the current banking model.

"I think we'll see some of the incumbent banks become utility providers and I think some banks are already having the conversation now, asking how do they become a utility," he said.

Finally, Berry concluded that the banking model will change hugely. "Banks will look to digitising as a means of reducing costs and I think they will have this issue of how they leverage digital to reduce their costs versus the test of having to reinvent as a proper challenger," he said.

"As a result banks will have a spate of partnering up with small firms to help them reinvent themselves whilst at the same time pushing a very slow digitising process as a means to reduce costs," he added.

The conclusions differed slightly and the opinions throughout the debate varied.

What did emerge, however, was that digitisation is changing the financial industry and the players will have to change with it. As for how far digital will actually go, only time will tell. ■.

Morocco's payments recovering post-crisis

Morocco's economy was adversely affected by the financial crisis. However, domestic demand for goods and services, driven by a fiscal policy to push stimulation and the protection of purchasing power, helped to sustain non-agricultural activities and was an engine of growth for Morocco's payments industry

In 2014, cheque payments and credit transfers were the most popular payment instruments, having a combined industry share of 97.1% in terms of transaction value, while the share of payment cards doubled from 0.5% in 2010 to 1% by the end of 2014.

The share of payment cards is rising as the government and banks promote awareness levels and associated benefits among consumers and merchants. The adoption of EMV standards and growth in e-commerce and retail industries also supported the industry's growth.

While leading card issuers push for growth by offering improved products and services and aggressive marketing campaigns, the government is also keen to encourage electronic payments and bring in a large number of the unbanked population within the formal banking system through its financial inclusion (FI) programme. According to statistics from the World Bank, the number of total deposit accounts relative to the population increased to 50% in December 2010, 54% in December 2011, 57% in December 2012, and 58% in June 2013.

Transaction values at ATMs were the main contributors between 2010 and 2014, representing a dependence on cash. However, with governments and domestic banks making sustained efforts to increase awareness levels and benefits of electronic payments, a gradual shift is anticipated over the next five years.

Payment infrastructure driving card growth

Banks and retail outlets in Morocco expanded their infrastructure networks during the review period into rural areas, to increase their customer base and improve financial access for consumers. The increasing acceptance of payment cards at retail outlets and a consumer shift towards making purchases directly with cards resulted in an increasing number of POS transactions between 2010 and 2014. Consequently, the use of payment cards is expected to register widespread acceptance between 2015 and 2019.

Similarly, contactless technology is being gradually rolled out across Morocco. In 2012, M2M Group, an electronic transactions processing solutions provider, installed a contactless ticketing system in the Casablanca tram system and in January 2014, the technology was extended to M'Dina bus network.

MOROCCO'S CARD TRANSACTION VOLUME BY CHANNEL (MILLION), 2010–2019

Year	ATM	POS
2010	117.1	10.0
2011	148.6	12.4
2012	171.9	16.2
2013	186.8	19.5
2014	205.6	23.6
2015	224.6	27.7
2016	243.4	32.2
2017	262.9	36.5
2018	282.9	40.5
2019	303.1	44.5

Source: Central Bank of Morocco and Timetric

MOROCCO'S CARD TRANSACTION VALUE BY CHANNEL ($BN), 2010–2019

Year	ATM	POS
2010	11.9	0.8
2011	15.1	1.0
2012	16.8	1.2
2013	18.9	1.4
2014	21.0	1.6
2015	20.4	1.7
2016	22.2	2.0
2017	24.2	2.2
2018	26.1	2.5
2019	28.1	2.8

Source: Central Bank of Morocco and Timetric

Debit cards continue to dominate

In terms of transaction value, debit cards remained the most popular payment card over the last five years. The Moroccan population is dominated by a Muslim population who generally avoid credit cards for religious reasons. Consequently, the debit card market registered growth in terms of volume and transaction value between 2010 and 2014. In order to boost card sales, banks and card issuers are offering EMV-compliant cards and bespoke products to meet specific customer needs.

MOROCCO'S PAYMENT CARDS BY TYPE OF CARD (THOUSAND), 2010–2019

Year	Debit Cards	Credit Cards	Charge Cards
2010	5,522.5	245.3	271.5
2014	9,065.7	332.6	373.9
2015	10,190.8	359.5	407.0
2019	15,063.6	457.0	528.0

Source: Timetric

The average transaction value for debit cards declined marginally at a CAGR of -0.17%, from $99.50 (MAD837.40) in 2010 to $98.90 in 2014. As consumers especially in rural areas prefer to use cash for purchases and coupled with low acceptance by merchants, the total average transaction value for debit cards decreased in recent years.

Banks are trying to attract their customers' to spend frequently at POS terminals using their debit cards, by offering them wide range of benefits including reward points and discounts at partner retailers.

Approval for Islamic banking offers growth prospects for credit card market

In June 2014, the Moroccan government approved a new banking law relating to establishing a fully fledged Islamic finance industry after years of false starts. The draft bill will allow both domestic and foreign banking companies to establish Islamic banking branches in Morocco. The new bill, which also contains legislation pertaining to the establishment of a sharia committee formed in coordination with the central bank, will help build a robust regulatory environment for the financial sector.

Presently, Attijariwafa Bank, which is part-owned by Moroccan King Mohammed VI's holding company Société Nationale d'Investissement has an Islamic banking subsidiary. Anticipating the approval of the new banking law, other banks such as BMCE Bank and Banque Centrale Populaire du Maroc (BCP), have equipped themselves to set up new banking branches adhering to Islamic standards. ■

Italy's government encourages the payment market

Italy is one of the world's most developed economies, although it was affected between 2010 and 2014 by the eurozone crisis. The country's real GDP growth declined from 1.7% in 2010 to -0.4% in 2014. The economy is expected to stabilise, with GDP growth rising from 0.6% in 2015 to 1.1% in 2019

In a bid to revive the economy, the Italian government introduced austerity measures and shifted its focus towards increased financial inclusion through the Save Italy plan in December 2011. The plan included mandatory opening of a free current account or a basic payment account by financial institutions for socially disadvantaged customers with an annual income of less than $9,950.50 (€7,500).

Government initiatives to limit cash transactions

While other European countries such as France, Spain and the UK are moving towards becoming cashless economies, cash is still the preferred payment instrument for Italians. Cash accounted for 85.6% of the cards and payments industry's transaction volume in 2014.

The government banned all cash-based transactions over $1,390 on December 8, 2011, as part of efforts to reduce the annual tax loss of nearly $139bn, and an additional $13.9bn lost to processing cash-based payments.

The government introduced a regulation in July 2014, making it mandatory for service providers such as wholesalers and retailers to install POS terminals to accept payments for transactions over $39.80. These initiatives are anticipated to reduce dependence on cash, and encourage payment card transaction values and volumes.

Traditional credit-averse environment supported growth in prepaid cards

The debt crisis and subsequent austerity policies led to a decline in overall consumer spending. The traditionally credit-averse nature of Italian consumers, coupled with their conservative spending attitude, is expected to result in a decline in credit card-based transactions.

This is expected to reduce new credit card issuance over the next five years and increase the issuance of prepaid cards as customers prefer pre-planned or budgeted spending.

The number of prepaid cards in circulation increased at a CAGR of 18.13% between 2010 and 2014, from 12.4 million in 2010 to 24.1 million in 2014 and is expected to further increase to reach 32.4 million by 2019. Growth in the prepaid card market can be attributed to improved infrastructure of POS terminals, security features and promotional offers by card issuers.

To capitalise on rising demand for prepaid cards among consumers, card issuers are now adding extra features to prepaid cards such as online functionality, global usability, easy reloading and contactless functionality. The Intesa Sanpaolo prepaid card can be recharged online, using mobile phone or at retail stores.

According to Timetric research, Poste Italiane, UniCredit and UBI Banca are the leading companies in the Italian prepaid cards market. To maintain their dominance, these banks are entering into partnerships with various companies to offer co-branded products. For instance, UBI Banca offers prepaid cards for readers, for club and disco enthusiasts and for the Alpine club.

Card personalisation is an important marketing strategy adopted by issuers to market prepaid cards. Issuers now enable customers to customise their cards by adding photos, themes, designs or company logos.

For instance, Intesa Sanpaolo offers card personalisation services on its Flash Visa payWave and Flash Card Expo prepaid cards. ■

ITALY'S CARD TRANSACTION VOLUME BY CHANNEL (MILLION), 2010–2019

Year	ATM	POS
2010	714.6	1,502.4
2011	707.0	1,566.9
2012	751.0	1,629.0
2013	801.7	1,813.2
2014	851.9	1,990.3
2015	895.1	2,145.8
2016	931.0	2,288.9
2017	963.6	2,423.7
2018	996.0	2,545.2
2019	1,025.4	2,648.7

Source: European Central Bank and Timetric

ITALY'S CARD TRANSACTION VALUE BY CHANNEL ($BN), 2010–2019

Year	ATM	POS
2010	163.9	158.9
2011	173.4	170.4
2012	176.5	158.4
2013	195.5	172.1
2014	208.6	180.8
2015	187.0	160.1
2016	196.1	166.4
2017	206.2	173.9
2018	216.6	181.3
2019	226.5	188.4

Source: European Central Bank and Timetric

ITALY'S PAYMENT CARDS BY TYPE OF CARD (MILLION), 2010–2019

Year	Debit Cards	Credit Cards	Charge Cards
2010	36.2	12.7	21.2
2014	48.1	10.5	16.5
2015	51.3	10.3	16.2
2019	61.4	10.6	16.2

Source: European Central Bank and Timetric

NUMBER OF ATMS AND POS TERMINALS IN ITALY (THOUSAND), 2010–2019

Year	ATM	POS
2010	51.4	1,496.5
2011	51.8	1,434.0
2012	50.7	1,510.7
2013	50.0	1,584.2
2014	49.4	1,655.8
2015	48.9	1,721.0
2016	48.4	1,780.7
2017	48.1	1,837.5
2018	47.8	1,890.6
2019	47.7	1,938.8

Source: European Central Bank and Timetric

The US expands its large payment market

The US has the world's largest payments market, as well as one of the highest levels of card penetration. In 2014, the US accounted for 86.6% and 88.2% of North America's transaction value and volume respectively. However, the cheque market is slowly falling in the US, as it is in many areas across the globe

Electronic payments steadily gained ground in the US between 2010 and 2014, and in terms of transaction volume they have overtaken the once-dominant cheque.

The decline in cheque transactions gathered pace in the last ten years, largely due to a surge in the conversion of cheques into automated clearing house (ACH) debits. The shift towards electronic payments has also been aided by contactless technology, which launched in 2004 and is now gaining significant momentum. US consumers have a variety of contactless choices, as all major payment networks – Visa, MasterCard, American Express and Discover – have contactless cards available. As contactless becomes more widely accepted, payment card transaction value and volumes are expected to increase further over the next five years.

Focus has also increased on m-payments, with the launch of new solutions such as Samsung Pay, Android Pay, Apple Pay and the Starbucks mobile wallet. Competition in the industry is likely to intensify further with the launch of CurrentC and Chase Pay in 2016.

In a highly competitive and mature market, banks and card issuers are facing changing regulatory, competitive and customer dynamics. While card issuers are subject to rising regulatory requirements and increased competition, consumer behaviour has also changed; consumers are becoming increasingly value-driven and are looking for benefits beyond traditional products or services. This has put increased pressure on profitability, forcing issuers to reassess products, costs and revenue streams.

USA PAYMENT CARDS BY TYPE OF CARD (MILLION), 2010–2019

Year	Debit Cards	Credit Cards	Charge Cards
2010	49.5	19.2	1.2
2014	65.8	26.4	1.8
2015	69.4	28.5	2.0
2019	82.3	35.5	2.5

Source: Timetric

USA CARD TRANSACTION VALUE BY CHANNEL ($BN), 2010–2019

Year	ATM	POS
2010	636.3	3,517.3
2011	663.1	3,898.0
2012	687.0	4,200.7
2013	709.6	4,530.0
2014	740.3	4,921.9
2015	770.5	5,315.4
2016	798.4	5,695.8
2017	823.0	6,059.4
2018	845.3	6,400.3
2019	865.4	6,728.4

Source: Timetric

USA CARD TRANSACTION VOLUME BY CHANNEL (BILLION), 2010–2019

Year	ATM	POS
2010	5.9	64.1
2011	5.9	71.0
2012	5.8	75.7
2013	5.9	81.8
2014	6.0	88.0
2015	6.1	93.8
2016	6.2	99.3
2017	6.3	104.4
2018	6.4	109.2
2019	6.5	113.9

Source: Timetric

Credit card market recovering from the recession

The US economy and employment levels were badly hit by the global financial crisis of 2008–2009, forcing many consumers to default on credit card payments. Banks subsequently recorded high volumes of bad debt. Most banks cleaned their customer bases and deactivated bad credit accounts; the number of credit cards in circulation fell as a result.

Employment opportunities have improved with US economic growth since 2010. Supported by a strengthening economy and low credit card delinquency, banks have again started to focus on credit card business, albeit adopting a more cautious approach in terms of issue. In addition to targeting consumers with high FICO scores, banks and card issuers are now also offering cards to consumers with low credit ratings. For consumers with poor or fair credit histories, the average percentage rate (APR) is higher than normal, and the cardholder is required to make a security deposit with the bank to obtain a credit card.

Banks' profitability under pressure due to interchange fee regulations

Profitability in the US cards and payments industry decreased following the regulation on interchange fee in 2011. Consequently, large banks saw their revenues on checking account and debit cards decrease, forcing them to adopt new strategies. To combat revenue erosion, banks increased checking account minimum-balances, maintenance fees and restricted reward programmes.

The Durbin Amendment caps the amount banks can charge retailers for swiping debit cards. The cap limits the fee to an average of $0.21 per transaction instead of the previous industry average of $0.44. The new limit took effect in the summer of 2011.

The current account fees that banks have found necessary to charge, to compensate for the Durbin Amendment, is gradually driving consumers away from debit cards. In the US, the regulatory burden on retail banking has compelled many to increase charges on their current accounts to maintain profitability. Free current accounts are diminishing, as banks impose fees to improve profitability. Wells Fargo ended its free current accounts in August 2012, making it mandatory for customers to pay a monthly service fee of $7 on all essential current accounts.

However, the Durbin Amendment only applies to financial institutions (FIs) with assets of more than $10bn – only a small proportion of the number of FIs in the US that issue debit cards, but also most of the cards in circulation. As a result, many larger banks have changed their focus on debit cards, and some are investing more considerably in credit cards.

Furthermore, for smaller banks and FIs, debit cards largely remain a profitable product to promote, and with the big banks' emphasis on debit cards shifting, there may be an even greater opportunity for them to expand their debit card business. ■

BPO Urged as Interchange Solution for Banks

Andrej Eichler, Head of Financial Industry Services at SIX Payment Services, looks at a possible solution to an upcoming problem regarding interchange fees in Europe. Some markets are going to be affected more than others and financial institutions need to prepare. BPO might be the answer to this conundrum

The European cap on debit and credit card interchange fees (0.2% and 0.3% respectively) which takes effect on 9 December 2015, promises to reduce costs for merchants across the continent and potentially benefit consumers through lower prices.

Yet for Europe's banks, the outcome is not necessarily so positive. In seeking ways to absorb the new cost pressures that this sweeping change will bring, processing efficiency is a logical direction to investigate. Many banks are using legacy platforms that have reached the end of their lifecycle, and – for the smaller players – lack the economies of scale that might help digest the reduced revenue flow.

Pressure continues with compliance issues. PCI DSS, the payment industry's bible, takes its toll on resources. Even some large and mid-sized European banks are not yet fully PCI compliant – relating to the level of their data security standards – and are already struggling to adapt to the huge demands stemming from the consumer side: to stay in the game when it comes to innovative solutions or new payment devices such as smartphones.

So far, European banks have used interchange fees to fund a lot of their investment costs. With the new caps on fees, these banks will need to look at alternative sources of investment finance.

The solution for some banks may be to contract a payment services provider to do Business Process Outsourcing (BPO).

Under this scenario, banks would retain their customer relationships and would outsource not just the technical processing including card management, authorisation, clearing and settlement etc. but also a choice of their business processes, such as cardholder-setup, contact centre, statement printing, fraud management or even the license sponsoring with the international card schemes, allowing them to leverage security, volume and the expertise of their outsourcing partner and providing a convenient starting point to take on new customers.

We believe this will become an attractive option for many smaller to mid-sized banks, with portfolios of several hundred thousand cards up to a few million, as they reconsider their strategy in the light of the changes to debit and credit card interchange fees. The impact of these changes is likely to be felt in the first months of 2016, as banks adjust to the new cap on charges.

The prospect of global payment service providers (mainly based in the US) offering a similar option is possible, but I doubt whether they will be able to tailor their services to a local European market and the particularities of the bank.

In order to preserve customer loyalty, some banks will also be keen to maintain their tailored version of credit cards for their local customers. Here again, an outsourcing partner can help, offering a 'white label' card branded to the local bank, yet with outsourced processing. This scenario will not affect the banks' cardholders, yet will provide massive efficiency gains for the bank.

Looking at the other side of the ecosystem, I expect that there will be a differentiation between the approaches of different merchants: most smaller merchants tend not to bother with the complex fee structure and appreciate paying an 'all-in' charge.

Larger merchants on the other hand are more aware of potential savings and are more prepared to participate in the expected volatility of interchange fees.

Yet whether lower interchange rates will lead to lower prices for consumers remains to be seen. Merchants will certainly be tempted to keep any savings to themselves, whatever national governments or EU regulators would like to happen.

We have already seen that as the differences in interchange rates between debit and credit cards reduce, card acceptance increases. I would expect that these new reduced caps will also boost card acceptance across Europe and will, together with contactless payments and other innovations, further enhance consumer behaviour.

I would like to see more benefits for all parties, from loyalty schemes and other bonuses for card holders, to data analytic services for merchants, helping them to understand their customers, to cross-selling opportunities for card issuers and additional services for card acquirers.

Besides the various benefits that may accrue, there should be the overall advantage of convenience, as both card and mobile payments become faster and more responsive, using near field communication and other technologies. This should also assist in convincing merchants to see card acceptance as an opportunity rather than an inevitable cost factor.

Will card issuers compensate the Interchange Reduction by cutting on cardholder services? There is a danger that as banks find their revenue from interchange fees falling, they will seek to recoup this money by withdrawing reward and cashback schemes, for example. It's also possible that credit card issuers will raise their interest charges for users who fail to repay balances during the free-funding period and increase upfront banking fees.

The effects of the Interchange reduction change will be particularly felt in certain markets, where card fees are higher. In Germany, for example, average credit card rates are 1.8%; in Poland, debit card charges are 1.6%.

When the European Commission published its Explanatory Memorandum in 2013, setting out why fees should be capped, it used a 'Merchant Indifference Test', aiming for a rate at which merchants didn't care whether they accepted cards or cash. This was to address the widespread misconception that cash is cheaper for merchants than cards.

The new regulations follow an extended campaign by the European Commission to bring down interchange fees stretching back to the 1990s. And it draws on the experience of regulators in the United States, Australia and Switzerland, where there has been stiff resistance from some banks to the changes.

The European Commission believes that lower fees, besides being 'good for consumers, good for business and good for Europe', as Competition Commissioner Margrethe Vestager said, will bring both lower prices and greater cost visibility for customers. 'It reduces a 'tax' levied on business by banks in the form of interchange fees, and releases the brakes that have so far held back innovation,' she said.

According to the Financial Times, the value of card transactions across the European Union in 2011 was €1.9trn ($2trn), and retailers across the continent have paid banks €13bn a year to handle card transactions – 70% of which was for interchange fees.

In the UK alone, the drop in interchange fees is expected to account for savings of £480m ($703m) a year, according to the British Retail Consortium, based on around 10.7 billion credit and debit transactions per year.

So for the banks, the loss of hundreds of millions of euros per year in interchange fees will certainly make a dent in their budget calculations.

Outsourcing their payment processing together with the related business processes could help banks to offset these costs and get ready for new payment methods at the same time. ■