

ELECTRONIC PAYMENTS

INTERNATIONAL



HEADING TO THE MAINSTREAM

RIPPLE AND BLOCKCHAIN LOOK TO FINALLY ACHIEVE LEGITIMACY

COUNTRY SURVEYS

Analysis and key payment market data for Iran, Uruguay and Azerbaijan

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The non-cash transaction volume is still growing worldwide, according to the 2018 *World Payments Report*. The growth also shows no sign of slowing – in fact, it is actually speeding up. *Patrick Brusnahan* reports

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Life Insurance International: Innovation Forum and Awards 2018

7th November 2018 • Waldorf Hilton, London

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- **Many issues related to innovation, transformation, regulation and change to be discussed to give a rounded picture of the life insurance market today**
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- **Oxford-style live debate considering whether advances in robo-advice and D2C insurance will make most financial advisors extinct**
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PAYMENTS ARE BEING TRANSFORMED, BUT DO NOT WRITE OFF THE INCUMBENTS



Douglas Blakey, Editor

The consultancy annual reports season is in full swing. The annual *World Payments Report*, traditionally one of the better reports of its type, comes to hand as *EPI* goes to press, and is covered on pages 16-17.

Two reports from Accenture are also worth a read. Accenture's research attempts to quantify the level of change in the global banking and payment industry structure. It finds, for example, that 17% of industry players in 2017 – around 3,200 players – entered the industry in the last 13 years, and have grabbed one-third of revenue growth in Europe.

In the seven major markets surveyed by Accenture – Australia, Brazil, Canada, China, the EU, the UK and US – the total number of players in banking and payments fell from 24,000 in 2005 to 19,300 in 2017, due to consolidation. Of the new institutions, 91% are payments companies, while others are fintechs and digital challenger banks. The percentage of new players in the EU is even higher, with 20% of 2017 participants entering the market since 2005; this amounts to 1,400 outfits.

UK: new entrants grab 14% of revenue

According to Accenture, the 1,400 new players in Europe since 2005 have captured 6-7% of banking and payment revenue, worth around €54bn (\$62bn) in 2016.

In the UK, the revenue shift has been much more pronounced: new competitors have grabbed about 14% of revenues. The biggest gains have been made by payments processors and licensed payment institutions, which have captured about 12% of the market.

While payments players such as Adyen, iZettle and Klarna are taking revenue share, they are not taking a commensurate slice of profits. It is relatively easy to get into payments – as Accenture highlights, capital requirements are low – but turning a profit is not so simple, and, for now, many new players are operating payments businesses as loss leaders. TransferWise has grown to two million users by charging a fraction of the fees charged by banks, and on an underlying basis remains loss-making.

Another new player, Azimo, is taking on established players with Azimo Business, enabling SME owners across the UK

and Europe to pay for goods, salaries and investments in 189 countries and territories, with pricing at around 25% of that of the high-street banks.

Fintech profitability: 8-12 years?

Accenture estimates that it could take eight to 12 years for a typical fintech start-up to achieve profitability. However, the report remains silent on just what percentage of fintechs will ever achieve profitability.

Such forecasts do little to diminish investor appetite, with fintech deals showing no signs of slowing down – quite the reverse: fintech M&A deals in the first half of 2018, some 141 deals, are worth a disclosed transaction value of \$39.3bn.

According to the latest *Fintech M&A Market Report* from international technology mergers and acquisitions adviser Hambleton Partners, total first-half deals are up 26% from the prior half-year. The number of deals also increased, up 8% from the second half of 2017. Again.

Payments and transaction processing deals capture the headlines with some eye-watering valuations. For example, Paypal's all-cash acquisition of payments provider iZettle, at 19x trailing revenues, resulted in a deal worth \$2.2bn.

Meantime, just in time for Sibos, another report comes to hand from SWIFT. Its white paper examines the drivers of payments transformation in Europe, and looks at the challenges and opportunities for financial institutions. The report's title, *The transformation of the European payments landscape*, is not, to be fair, over-hyped. PSD2, Open Banking, the growth of instant payments, and the Eurosystem's pan-European Target Instant Payment Settlement (TIPS) are just some of the challenges for the incumbent banks.

The fashionable argument with many is to write off the incumbents: "they don't get it, culture is dated, legacy systems, slow to reinvent themselves" are among the usual arguments.

The writer is never in danger of being accused of being fashionable. I have had the privilege this year to share a platform on the conference circuit with payments heads from banks such as ING, Nordea, BNP Paribas, UniCredit and Deutsche Bank, among many others. I would say that the major European banks are facing up to the challenges with great energy, deep pockets and sound business strategies. ■

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NEWS DIGEST

Amex launches new service to accelerate supplier payments



American Express has launched a new service, Early Pay, in a bid to speed up payments to suppliers.

The Early Pay service is designed for large US businesses purchasing goods from US-based suppliers. It connects suppliers to a digital platform that enables invoices to be paid before their due dates at an early-payment discount.

Amex's senior vice-president and general manager for global commercial financing, Gina Taylor Cotter, said: "The genesis of Early Pay actually began within the walls of American Express. We originally developed a service to use with our own suppliers in 2016, and its quick adoption and success led us to develop the Early Pay solution for external clients.

"Now companies can leverage their accounts payables to reduce costs of goods and services while offering automatic, flexible payment terms to their eligible suppliers."

The payments operator will not charge implementation, setup or maintenance fees for buyers signing up.

Early Pay offers several funding options to buyers, including one in which Amex funds early invoice payments to suppliers on behalf of buyers. This option enables buyers to improve their cash flow and meet working capital requirements while maintaining the existing terms of payment with suppliers. Buyers repay Amex on the original invoice payment date.

Another option enables buyers to self-fund invoice payments prior to the due date. ■

BK GLOBAL CONSORTIUM TO BUY \$353M CRYPTO STAKE

Singapore-based BK Global Consortium has agreed to purchase a stake in South Korean digital currency exchange Bithumb, which is operated by BTC Korea Holdings, for KRW400bn (\$353m).

BK Global Consortium is led by Kim Byung-gun, a plastic surgeon and prominent blockchain investor.

"Kim has demonstrated his multinational management ability in the field of

healthcare, fintech, blockchain and biotech firms. He is the right person to pursue the systemisation and globalisation of the virtual currency exchange," a consortium official commented.

The consortium will acquire 50% plus one share of BTC's 75.99% stake in the crypto exchange.

The consortium, which was BTC's fifth-largest shareholder, will become Bithumb's

largest stakeholder on completion of the acquisition, with a 38% stake. The deal is expected to complete by February 2019.

Bithumb came under scrutiny earlier this year after the theft of virtual coins worth around KRW35bn from its platform. The exchange halted all deposit and withdrawal service shortly afterwards. Despite the hack, the firm posted a net profit of around \$35m in the first half of 2018. ■

WORLDPAY EXPANDS REAL-TIME PAYOUT SERVICE TO OVER 50 COUNTRIES

Payments platform WorldPay has expanded the reach of its real-time payout service, FastAccess, to more than 50 countries in Europe and Asia.

The FastAccess service enables card-based payouts within 30 minutes, and will now be integrated with Worldpay's Bankout solution, which currently operates in 154 jurisdictions.

Through the service, customers can receive funds or refunds by card in near-real time, either through a mobile wallet or directly in to a local bank account.

The payout solutions, WorldPay said, have the potential to benefit multiple industries, including travel and tourism, gaming and insurance.

Worldpay's executive vice-president and head of global enterprise e-commerce, Shane Happach, said: "As more and more companies send payments at lower values cross-border, it will become a competitive differentiator to send quicker payouts to consumers and inexpensive disbursements to vendors and suppliers."

Happach continued: "It is estimated that, by 2025, the sharing economy will generate Europe-wide revenues worth over €80bn (\$92.8bn) and facilitate nearly €570bn of transactions.

"At the heart are seamless, transparent, secure payouts, which can be made via card, mobile wallet or bank transfer in any currency, anywhere in the world." ■



PAYPAL TEAMS UP WITH WALMART TO OFFER CASH SERVICES



PayPal has partnered with Walmart to offer various financial products and services for their shared customers in the US.

As part of the alliance, PayPal cash-in and cash-out money services will be available at Walmart for an exclusive fee of \$3 per service. The services will enable

users to withdraw cash from their PayPal accounts at Walmart stores. Customers can also load cash onto their PayPal balances.

Similarly, PayPal Cash Mastercard holders will have access to their cash balances via Walmart Service desks, ATMs and cash registers for a low fee.

Walmart's senior vice-president of services and digital acceleration, Daniel Eckert, said: "With 90% of Americans living within 10 miles of a Walmart store, we know that offering PayPal cash-in and cash-out money services for an exclusive low fee is going to provide great value to the many people who rely on Walmart and PayPal to help manage and move their money."

PayPal president and CEO Dan Schulman added: "We are committed to working together to make it simple and easy for people to use PayPal cash-in and cash-out money services at every Walmart location in the US. We look forward to working hand in hand to help people and families with their financial services needs."

PayPal recently updated its online payments mobile app to improve the customer experience. As well as sending and receiving funds, the upgraded app offers new features such as alerts, contact list personalisation and advanced authentication. ■

Norway's Vipps taps Inside Secure for mobile contactless payments

Vipps, the provider of Norway's national BankAxept payment system, has selected Inside Secure in a bid to protect its mobile contactless payments.

BankAxept's contactless payment capability will be secured by Inside Secure's Code Protection and Whitebox solutions. The protection will be enabled for all cards and mobile phone payments.

Inside Secure uses the latest mobile payment technology and code-protection tools to identify potential threats and protect applications.

Vipps official Bjørn Skjelbred said: "We see Inside Secure as a dedicated partner in our commitment to providing the strongest possible security for our country-wide consumers. It's clear that Inside Secure offers not only the technology, but also the knowledge needed to work with demanding financial institutions."

Skjelbred added: "Inside Secure's protection solutions for mobile contactless payments provide the peace of mind we need as we expand our business and innovate."

Owned by Norwegian banks, Vipps is responsible for processing eight out of 10 store purchases made by card in the country.



It is tasked with managing payment solutions in new channels on a commercial basis, which include the deployment of contactless payments by card and mobile, online payment solutions, peer-to-peer payments, electronic invoices and digital authentication solutions. ■

ALLIED WALLET ADDS AI FEATURES TO PAYMENT GATEWAY

Online payment processor Allied Wallet has incorporated new artificial intelligence (AI) features into its NextGen payment gateway in a bid to prevent fraud.

The new AI-based features, known as the Transaction Anomaly System, are part of the latest version of NextGen, which is capable of assessing hundreds of transactional data points to identify spikes and anomalies, and determine their scores in real time.

Allied Wallet claims that deployment of the latest version will enable an in-depth review of all transactions, offering an additional layer of security.

Allied Wallet CEO Andy Khawaja said: "Your business is only as strong as your security. Protecting your profit is important, but in our opinion, protecting your customers is even more important."

"As e-commerce continues to grow, it's absolutely necessary that we all do our best to protect the online shopping experience and implement new technology to prevent information from being compromised." ■

FITBIT, MASTERCARD TO LAUNCH FITBIT PAY IN THAILAND

Wearable device manufacturer Fitbit has teamed up with Mastercard, Siam Commercial Bank and Krungthai Card to launch Fitbit Pay in Thailand.

Customers can now add Mastercard cards to two Fitbit smartwatches, the Fitbit Ionic or Fitbit Versa, to make contactless payments. Fitbit Pay will also be introduced on the Fitbit Charge 3 soon.

The service uses Mastercard's Digital Enablement Service, which digitises the card onto the device to enable contactless transactions. All contactless payments are secured through its tokenisation technology.

Fitbit's regional director for South East Asia, Hong Kong and Taiwan, Louis Lye, said: "Fitbit Pay will provide consumers with the option of hassle-free contactless payments, which is in line with the Thai government's efforts to establish a digital economy in the country.

"It also offers banks an exciting opportunity to engage with their customers in unique ways while supporting them on their health and fitness journeys."



Mastercard's country manager for Thailand, Donald Ong, added: "Mastercard is committed to driving the development and wider usage of contactless payments technology in Thailand.

"Thais are living increasingly connected lifestyles which are changing the way they interact, engage and make transactions.

"This collaboration between Mastercard, Fitbit, financial institutions and merchants enables Mastercard cardholders to make quick and easy contactless payments on the go domestically and internationally, while still enjoying the highest level of security that protects their personal data and secures their transactions." ■

WESTERN UNION LAUNCHES HIGH-VALUE UK ACCOUNT-TO-ACCOUNT TRANSFERS

Western Union has launched a high-value account-to-account money transfer service that enables its UK customers to transfer funds to any bank account in the world.

The service will enable customers in the UK to send up to £50,000 (\$65,500) directly into a beneficiary's bank account through a smartphone using the Western Union mobile app, or from wu.com.

Western Union Global Money Transfer president Odilon Almeida commented: "With this launch, we have added one more milestone in our quest to serve the diverse money transfer needs of our customers – many of whom are global citizens with assets and holdings in multiple countries."

Almeida continued: "The opportunity to send £50,000 per transaction, 24/7, around the world enables our customers – representing a mix of affluent expats and natives – to send money in larger values with confidence.

"They send money between their bank accounts across countries for high-value purchases such as real estate, or

financial payments such as mortgages or investments."

Western Union, which has recently invested heavily in expanding its bank payout network and real-time compliance controls, now plans to expand the account-to-account transfer service to other major money-sending countries.

Western Union global payments president Jean-Claude Farah said: "Now our money transfer customers can also connect to billions of accounts in more than 70 countries, and this will continue to accelerate."

According to data from the World Bank, around \$26bn was sent through person-to-person transfers from the UK to the rest of the world last year. Around \$13bn of the total amount sent was remitted to Nigeria, India, France, Germany, Pakistan, Poland and China.

Western Union said it currently caters to more than 150 million consumer-to-consumer and business-to-business customers in 200 countries. ■

Westpac introduces mobile cheque deposit

Westpac has introduced mobile cheque deposit solution in a bid to streamline cheque processing services.

The move will allow all eligible customers of the Australia-based bank to deposit cheques using a smartphone. Customers upload pictures of both the sides of a cheque to the Westpac app, after which it will clear in three business days. Westpac research recently found that around 41% of Australians still use cheques for payments.

Westpac Consumer Bank CEO George Frazis said: "While cheques have a reputation for being old-fashioned, we still receive more than 30,000 from customers every day.

"We've introduced our Mobile Cheque Deposit feature to offer customers even more choice and convenience in how they do their banking. Now, more customers will have the capability to deposit their cheque via smartphone, as well as the option of heading into a branch or visiting one of our smart ATMs."

All iPhone and Android phone users with the latest version of the Westpac app installed can use the service, with an initial weekly deposit limit of A\$1,000 (\$713). ■

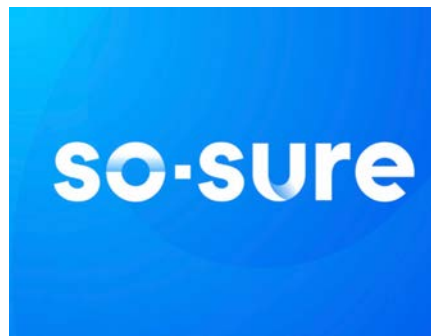
Starling Bank Marketplace adds mobile phone insurance

Starling Bank's in-app Marketplace has added so-sure, to enable the bank's customers to access mobile phone insurance.

so-sure is a start-up that claims to offer quick, secure and reliable mobile phone insurance. It declines less than 4% of mobile insurance claims, a rate that it says is far lower than the traditional insurance industry.

so-sure is also introducing a 'social insurance' platform that enables customers to connect policies with friends and family members who also have policies with so-sure. If no one to whom a customer is connected makes a claim, the customer receives up to 80% of their premium back at the end of the policy year.

so-sure describes its offer as "one simple policy with no hidden terms and covers customers for loss, theft, accidental damage, out-of-warranty breakdown and more".



Starling's Marketplace has been expanding its products and services to meet the needs of its growing customer base. It launched in February 2018, and offers customers direct access to financial services and products securely on their phone.

Starling already has partnerships with pension provider PensionBee, digital investing services Wealthsimple and Wealthify,

mortgage broker Habito, travel insurance provider Kasko, and receipts and loyalty partner Flux.

Starling added life insurer Anorak to the platform in September, and aims to have 25 marketplace partners by the end of the year.

Megan Caywood, chief platform officer at Starling Bank, said: "Through our Marketplace, we want to enable our customers to manage their whole financial life in one place. As a mobile-only bank, we understand the need for affordable mobile phone insurance, so partnering with so-sure was a natural fit.

"so-sure shares our ethos of putting the customer first, and is another example of our commitment to partnering with disruptors that are working to improve customers lives through intuitive products and fair and transparent pricing." ■

FUJITSU LAUNCHES BIOMETRIC PAYMENTS SYSTEM

Fujitsu Laboratories, a research centre owned by Japanese technology giant Fujitsu, has developed a non-contact palm vein and facial data authentication system for retail payments at physical stores, or for admissions to events.

"By using this new technology, real-time authentication can be performed on a scale of one million people without inputting additional personal information, such as with cards or other types of information, while controlling the increase of computing resources needed for the authentication

server," Fujitsu said in a statement.

Users hold their hands over a payment terminal and stand in front of a face-scanning camera. To enable instant facial-recognition processing, Fujitsu has developed an algorithm that reduces processing size to a tenth of that provided by traditional technology.

"Facial data captured by a camera while individuals operate a payment terminal is used to narrow down similar groups from databases that have a scale of one million registered users.

"When actual authentication is needed at time of payment, users in the selected group can be quickly identified simply by holding their palms over payment terminals," Fujitsu noted, adding that separating the two recognition processes reduces the load on the authentication server and supports high-speed processing without the need to increase resources.

The company plans to announce further details at the *International Conference on Image Processing 2018* in Athens, and make the technology practical by 2020. ■

SQUARE TARGETS BUSINESSES WITH NEW INSTALMENT PAYMENT SERVICE

Payment processor Square has introduced a service that enables businesses to offer financing to customers.

The Square Installments service aims to benefit smaller businesses and sellers that are otherwise unable to offer instalment payments due to prohibitive minimum-sales requirements.

The company said the process of setting up similar existing options is time-consuming and labour-intensive, preventing sellers from providing flexible payment services. With no minimum sales volumes and quick setup, the new payment method eliminates these difficulties, Square claims.

Square Installments is offered by Square Capital, a wholly owned Square subsidiary. Square Capital head Jacqueline Reses said: "We're focused on removing

the complexity associated with financial products, enabling more businesses to access incredible tools that can help them grow. Square Installments delivers simple and quick financing to customers seeking greater flexibility as they make purchasing decisions."

Customers apply online to use Square Installments. Once approved, they receive the option to pay for purchases in fixed instalments over three, six or 12 months. The service is available through participating Square sellers in 22 US states for purchases from \$250 to \$10,000.

According to Square's August 2018 *Consumer Shopper Survey*, 68% of respondents said they were likely to consider a small or local business for purchases if they offer financing options. ■



BRAINTRI: POWERING BANKS THROUGH BIG DATA AND OPEN BANKING

Poland's mobile banking sector is dynamic and ambitious, and embracing the full potential of Open Banking opens doors to more innovative solutions. Wojciech Zatorski, COO of Braintri and creator of Biffie, speaks to *Briony Richter* about the products and services that are transforming the industry

With more consumers turning to digital channels, financial operations are becoming far more digitally focused. This revolutionary shift has led to the growth of fintechs.

Braintri was formed in 2013, and specialises in mobile applications, payments and Big Data. In September, it was awarded the 2018 Polish Innovation Award for Jiffie, a mobile payment and loyalty technology that is also Bluetooth-based.

MOBILE APPS

Braintri has been significantly involved in the development of mobile apps for the largest banks in Poland. Speaking about the award, Zatorski says: "We have been involved in a lot of innovative projects with our customers, and that has advanced developments within the Polish sector. We also won 'Best of Show' at *Finovate* New York in 2017."

Braintri has held a pivotal role as part of the team developing PKO Bank Polski's IKO mobile banking app.

Zatorski explains: "In 2013 we had been asked by the bank to help in the process of transforming a bank's mobile wallet token-based transactions service that has been used primarily for quick ATM withdrawals, in a limited number of POS and into the Polish mobile payment scheme.

"The idea was to start the scheme with the critical mass of users and large-enough acceptance network. Initial conversations with the banks led to creating a joint venture of the six largest Polish banks, which together had around 70% of Polish banked customers."

The banks involved were Alior Bank, Bank Millennium, Bank Zachodni WBK, BRE Bank, ING Bank and PKO Bank Polski, and the joint venture had the goal of building a common standard for mobile payments.

POLISH CONSUMERS

Zatorski says Polish consumers adapted to digitisation very quickly. "Both the banking industry and customers across Poland have moved quickly from standard traditional branches to internet banking to mobile," he notes. "Consumers are very receptive to all the new features that are delivered; for example, in the first week of Apple Pay launching in Poland there were 200,000 activations."

He adds that in the fast-paced market, cheques are almost non-existent. According to GlobalData research, levels of awareness and holding of mobile wallets are slowly rising among Polish consumers – a trend that should become more significant as smartphone penetration increases. By 2021, smartphone penetration is expected to reach 70% of Poland's adult population.

OPEN BANKING

Zatorski believes that, in many ways, banks and financial organisations in Poland are better equipped and more motivated to implement the PSD2 regulation than their European neighbours. Braintri is working alongside KIR, the national clearing house that provides solutions to meet the needs of the banking and payments sectors.

Commenting on the Open Banking transformation, Zatorski says: "I'm very proud of the work we have done. Poland is going to have a single standard for Open Banking – the PolishAPI."

The PolishAPI standard is the critical part of implementing Open Banking in the Polish financial sector, providing a single platform to enable third parties to access payment accounts and offer tailored services.

Embracing all the opportunities of Open Banking will give banks and financial institutions the ability to be at the forefront of this financial revolution, and Braintri has two products that aim to do just that.

One is the Jiffie payment solution, which enables customers to pay through any Android or iOS phone, and also allows merchants to include loyalty programmes. This has created a frictionless app that can help target customer behaviour and communication at any time.

The unique aspect of Jiffie lies with its Bluetooth functionality. Using Jiffie, merchants can plug an adapter into older cash registers or POS terminals, allowing them to accept wireless payments.

The other product is Biffie, which was created by Zatorski. Many banks are struggling to utilise the full potential of Open Banking, and a lot of the problems stem from outdated legacy systems. This is where Biffie comes in; but how does it tackle that problem?

Zatorski explains: "Biffie is our data-offloading engine. The platform takes all customer data from the core banking system. It then goes into advanced analytics and starts gathering more data on customer behaviour.

"You also get additional benefits: for example, the process has lower IT costs. It is fully operational and ready for commercialisation."

Poland is one of Europe's most innovative markets, with a consumer base that welcomes new technology that makes their financial lives easier.

The ability to leverage Big Data is becoming more important, and banks will need to address this to thrive in an Open Banking environment. ■

RIPPLE:

GAINING MOMENTUM IN CROSS-BORDER PAYMENTS

With major US bank PNC joining the growing list of banks that belong to RippleNet, Ripple's blockchain technology is increasingly achieving mainstream legitimacy. *Robin Arnfield* reports

Convenience is touted as the major advantage of virtual banking, but it is not the only one: there are many reasons to bank online, from 24/7 service and a speedy process.

In September 2018, Ripple said PNC Treasury Management is to participate in RippleNet, the US fintech's inter-bank blockchain network, enabling PNC's commercial clients to receive real-time cross-border payments via Ripple.

"Leveraging Ripple, a PNC commercial client in the US receiving a payment from an overseas buyer will receive payments against their invoices instantly, transforming the way they manage their global account receivables and allowing them to better manage their working capital," a Ripple press release noted.

"PNC is an early adopter of a lot of payments and banking technology," says senior Aite Group analyst Talie Baker. "For example, in August 2018, PNC said it would allow clients to originate payments to corporate or consumer receivers via The Clearing House's RTP [real-time payments] network, so it isn't surprising that PNC is involved with Ripple."

EVOLUTION

"We've seen an evolution from the original idea of just using cryptocurrency to the

concept of using blockchain platforms separately from cryptocurrencies to address problems in the payments industry – specifically B2B and P2P transfers – especially for smaller businesses and enterprises," says senior Celent analyst Alenka Grealish.

"In Ripple's case, this has resulted in the firm developing enterprise-level software to facilitate a variety of cross-border transfers, not just B2B. We're now at the tipping point



**WE'RE NOW AT THE
TIPPING POINT OF
ENTERPRISE AND BANK
USE OF THE BLOCKCHAIN**

in terms of enterprise and bank use of the blockchain, with early-mover banks and other enterprises moving into production and fast followers moving into pilots, which begins fuelling the network effect. The recent announcement of PNC joining RippleNet is

an indicator of this phenomenon."

Speaking at Ripple's October 2018 *Swell* conference in San Francisco, Cory Johnson, Ripple's chief market strategist, said: "The world is used to getting things, right now, on demand. They aren't waiting for anything. When we look at blockchain and the solutions it offers in cross-border payments, we have an opportunity to address their needs."

A survey of nearly 700 global payments professionals across multiple industries and in 22 countries for Ripple's *Blockchain in Payments* report found that 18% of respondents are in production or near production for blockchain-based payments. The report, released at the *Swell* conference, said that a further 27% of those surveyed are in pilot with or are close to signing with a blockchain-based payments provider.

Other payments-related blockchain initiatives include the IBM Blockchain World Wire, the JP Morgan Interbank Information Network, Visa B2B Connect, and the Stellar Development Foundation.

BRIDGING FIAT CURRENCIES

As use of blockchain for cross-border payments moves into production, the next step change will be the use of cryptocurrencies to enable real-time settlement. The cryptocurrency will act as a bridge between

THE XRAPID PROCESS

An xRapid payment flow from the US to Mexico involving Bittrex and Bitso will proceed as follows:

Bittrex and Bitso are Ripple's preferred digital asset exchanges for xRapid transactions moving through US dollars and Mexican pesos respectively.

An FI with an account with Bittrex initiates a payment in US dollars via xRapid, which is instantly converted into XRP on Bittrex. The payment amount in XRP is settled over the XRP Ledger.

Bitso – through its Mexican peso liquidity pool – instantly converts the XRP into fiat currency, which is settled into a destination bank account.

Source: Ripple

two fiat currencies, Grealish says.

However, senior Aite Group wholesale banking analyst Erika Baumann warns that using a cryptocurrency as the bridge between two fiat currencies introduces extra FX risk, due to the volatile nature of cryptocurrencies.

Traditionally, financial institutions (FIs) provide liquidity for cross-border transfers by pre-funding Nostro accounts on each side of a transaction in each country's native currency. According to a 2016 McKinsey *Global Payments* report, there is approximately \$5trn dollars sitting dormant in these accounts around the world.

"The big benefit is that real-time settlement eliminates the need for pre-funded accounts at correspondent banks," says Grealish. "Blockchain's use case in cross-border payments is meeting two of the three requirements for success: customer value and technological viability. The third, economic viability, is still a work in progress and hinges on at least one of the contenders achieving the network effect."

RIPPLE'S PLATFORM

According to Grealish's Celent report, *Blockchain in Action in Corporate Banking: Contenders out of the Blocks*, Ripple "is the only blockchain technology provider to FIs that offers the entire stack from the protocol and network to the applications and a native digital asset (XRP)."

Grealish wrote that Ripple "is striving to connect not only banks but also other payment providers and companies, in particular new economy companies. It is solving end users' cross-border payment pain points and FIs' internal challenges (e.g. legacy systems, the need to de-risk and retrench correspondent banking relationships, and liquidity constraints)".

Ripple has three products addressing key issues related to payments:

- **xCurrent:** A messaging and settlement platform that allows FIs to communicate information about a payment with each other in real time, and settle the payment instantly;
- **xVia:** A protocol that standardises connections between different payment networks, so service providers such as money network operators (MNOs), banks and corporates can send payments via any RippleNet-participating FI. The advantage of using Ripple's protocol is that it makes integration with other FIs and payment services companies much easier than integrating with multiple different companies' APIs, and
- **xRapid:** A liquidity management system enabling businesses to source liquidity on demand using Ripple's XRP cryptocurrency and its XRP Ledger. This involves exchanging fiat money for XRP and then instantly into the desired fiat currency. Ripple says on-demand liquidity means quicker payments, no more tied-up capital, and no more reliance on big banks to handle foreign exchange.

After being in pilot phase with several money-transfer firms, including MoneyGram

and Western Union, xRapid was commercially launched in October 2018 and is live with three companies: London-based MercuryFX, US-to-Mexico remittance service Cuallix, and wholesale cooperative financial firm Catalyst Corporate Federal Credit Union, which serves 1,400 US credit unions.

So far, Ripple has not publicly announced that any banks are piloting xRapid, and according to Reuters, said that major banks are unlikely to be the first to test or use it. "PNC Bank will not be using XRP or xRapid to carry out payments for now," Asheesh Birla, Ripple's senior vice-president for product management, told Reuters.

In May 2018, Birla said that for payments in the US-Mexico remittance corridor, companies using xRapid saved 40-70% compared to normally FX broker fees.

"An average xRapid payment took just over two minutes, compared to today's average of two to three days when sending cross-border payments," Birla wrote in a blog.

"The portion of the transfer that relies on the XRP Ledger takes two to three seconds, with the additional processing time attributed to movement across the intermediary digital asset exchanges and local payment rails."

DEPLOYMENTS

Ripple CEO Brad Garlinghouse announced at *Swell* that, between quarter three of 2017 and quarter three of 2018, Ripple's customer base grew by 100% to over 120. The company is signing up an average of two production customers per week across its suite of products, he said.

According to Garlinghouse, Ripple now has customers in over 40 countries in six

RIPPLE'S BLOCKCHAIN IN PAYMENTS REPORT: KEY FINDINGS

- **This year, blockchain moves from experiments to production:** 18% of respondents are in production or near production for the payments use case.
- **The tipping point for mass adoption of blockchain is fast approaching:** 45% of those surveyed said they are already in production, piloting or close to signing with a blockchain provider.
- **Use of digital assets in payments is experiencing breakthrough interest:** 75% of respondents state they are extremely or very interested in using a digital asset as a settlement and/or a base currency.
- **Growing blockchain connectivity facilitates digital asset adoption:** 85% of those using blockchain in production and 90% of those quickly moving to production are either extremely or very interested in using digital assets as a form of payment.
- **The size of the global market for cross-border payments is \$27trn:** Another \$20trn could be up for grabs during 2018-2026. ■

MAJOR COMPANIES USING RIPPLE:

- Brazil's Itaú Unibanco, which uses xCurrent;
- Santander, which uses xCurrent for its One Pay FX retail P2P cross-border transfer service. One Pay FX launched in April 2018 in Spain, the UK, Brazil and Poland, with other countries to follow. InnoVentures, Santander's \$200m fintech venture capital fund, invested in Ripple in 2015;
- Amex's FX International Payments business and Santander launched a partnership with Ripple to launch cross-border non-card – i.e. bank account to bank account – B2B payments via RippleNet in November 2017 between the US and the UK;
- SEB, which has now processed \$1bn over RippleNet using xCurrent;
- Indian banks Axis Bank, SBI Remit, Yes Bank and IndusInd Bank;
- UAE Exchange, one of the largest remittance providers in the Middle East, uses xCurrent;
- MoneyGram launched a pilot of xRapid in January 2018, and
- SBI Ripple Asia, a joint venture between Ripple and Japanese banking group SBI Holdings, went live in October 2018 with MoneyTap, an xCurrent-based app that lets consumers make instant domestic payments via RippleNet using a bank account or phone number or QR code. It is live with three Japanese banks, and will be gradually rolled out to the 58 banks in the SBI Ripple Asia-led Japan Bank Consortium. Japan's Ministry of Finance granted a licence to MoneyTap in September 2018. ■

continents, including new corridors in Africa, North America, South America, Europe and Asia.

“Ripple has achieved a record ‘in production’ number, because it has put in place the critical building block for success in implementing blockchain-based technology and scaling it,” Grealish wrote in her report.

“Ripple's standard applications and the RippleNet agreement enable relatively fast onboarding. Through RippleNet, Ripple has overcome the challenges of forming a consortium blockchain: governance, standards and scale. Ripple establishes an agreement with network participants to use the same technology – such as xCurrent for banks – and adhere to a consistent set of rules and standards to ensure operational consistency and legal clarity.

“Its rulebook was developed in partnership with the RippleNet Committee. On the tech side, a RippleNet member needs only to plug in once to transact with any other RippleNet member; on the commercial side, members wishing to transact with each other need to establish liquidity accounts.”

Remittance companies partnering with Ripple include RationalFX, Xendpay and InstaReM for transfers from the UK to Malaysia, Vietnam, Indonesia, Sri Lanka and Bangladesh; Remitr and FlutterWave from Canada to Nigeria; and Beetech and InstaReM

from Brazil to Spain, Italy, Germany, France and Portugal.

In September 2018, London-based TransferGo began using Ripple for real-time transfers to its Indian banking partners for the Europe-to-India corridor. TransferGo said it saw initial transfers over RippleNet take just six minutes. It is offering instant transfers via RippleNet to India for a fee, and free RippleNet-based transfers that take two to three days at a mid-market inter-bank exchange rate.

“It is notable that, so far, the banks and other companies using Ripple haven't provided much information on their success or their cost-savings with the platform,” says Baumann. “But I think Ripple is strategically positioned in terms of the partnerships it has established.”

“The blockchain is a great solution for digital remittance firms like TransferGo or Remitly, as it helps them save costs on infrastructure,” says Baker.

“But for established MNOs like MoneyGram and Western Union, the blockchain's real benefit is taking infrastructure costs out of their business.

“The remittance business is now so price-competitive due to the advent of digital-only players. So, because the MNOs are being squeezed on their margins, they aren't passing on cost-savings from the blockchain to customers.”

SWIFT'S RESPONSE

In response to blockchain initiatives such as Ripple and Visa B2B Connect, and to non-bank competitors in the cross-border space, SWIFT has developed SWIFT gpi (global payments innovation).

Elizabeth McQuerry, who heads Glenbrook Partners' global payments practice, described SWIFT gpi “as the next generation of traditional correspondent banking, implementing enhancements to make the sector more competitive through payment tracking, greater transparency, and same-day value delivery within the network of users”.

New technology offered in SWIFT gpi includes a cloud-based tracker service that uses APIs to monitor the process of all payments.

SWIFT gpi has a strong service level between the banks involved, so not only are gpi payments tracked and monitored, but they move faster as they must be processed within a certain timeframe. According to SWIFT, with gpi, payments are credited within 24 hours from initiation – and most within a few hours, or even minutes.

“SWIFT is going through its second evolution through gpi, and worked with some big US financial technology vendors, including ACI Worldwide, on gpi to really try to solve the cross-border issues involved in using SWIFT,” says Baker.

“With gpi, there are finally real-time capabilities for payments. The problem for corporates is that there is ambiguity in the market as to what solution will become the standard for cross-border transactions – for example the card networks' platforms, SWIFT or Ripple.” ■



ONPEX: USING APIS TO BUILD CUSTOM SERVICES

Using flexible APIs enables businesses to harness the power of data they hold. CEO Christoph Tutsch explains how Onpex's personalised solutions can completely transform the process of payments and banking. *Briony Richter* reports

Onpex is a leading provider of multi-currency IBAN solutions. It enables businesses to develop their own financial services through an API-focused software-as-a-service platform that creates cost-effective, seamless and compliant payment and banking solutions.

At the heart of Onpex are simplicity, transparency and automation. Explaining the landscape and what Onpex can achieve, Tutsch says: "The whole banking environment is pretty complex in the back end. There are a lot of information services like SWIFT message, fixed APIs etc. All this needs to be orchestrated properly. What we do is integrate everything into our platform and expose this with very simple APIs to our clients."

"In a core banking system, first everything starts with a normal bank system, and then we provide very simple, easy-to-integrate APIs for account management, account opening, account closing, transaction banking in SWIFT and SEPA environments. Furthermore, there are local and cross-border capabilities in multicurrency, and then there's the added flexibility of changing currencies within the account or between accounts."

"What we do is connect to clearing environments," Tutsch continues. "For example, we are connected to 25 currencies; by the end of this year, another 15 will come."

When supporting banks, Onpex will automate their payments with its multicurrency IBAN accounts while also meeting the requirements to remain compliant with PSD2. The organisation has also been innovating continually to create new solutions to enable convenient, fast and frictionless processing.

The ever-changing technological environment is moving rapidly alongside an increasingly compliance-focused landscape. In an Open Banking world, banks and financial institutions are turning to companies such as Onpex to provide the payment solutions that can thrive in the new financial ecosystem; automation is key to solving their inherent complexities.

BANKING AS A SERVICE

In August 2018, Onpex moved swiftly into the banking-as-a-service space, launching its cloud-based service that enables business to build and manage their own financial services. Within the platform, various tools enable functions such as IBAN issuing, Single

Euro Payments Area (SEPA) and cross-border payments, as well as multi-currency management.

The innovation was developed as Onpex acknowledged a gap in the market for product offerings to incumbent banks and payment service providers. Asked about their capabilities, and the clients that use banking as a service, Tutsch replies: "Our clients are mostly either e-money issuers, bank institutions or even banks, who use our software and services to either completely enable their transaction banking and management capabilities, or to improve their existing services."

He continues: "For example, we just signed with a client with 1.8 million e-wallets out there, and we made the e-wallets bankable. We attached an IBAN to each e-wallet and suddenly it's a multi-currency e-wallet, including an IBAN."

"When it comes to banks, core banking systems are very linear. Our system can build more accounts and structures for marketplaces. This means that banks that are connecting to our system can easily enhance their core banking environment with modern APIS and more advanced logic. Technology plus financial services is what we summarise as banking as a service," Tutsch explains.

Banking as a Service is a great example of how Onpex provides transparency and simplicity to businesses across the financial sector through APIs. The automation allows for a far more seamless integration into business processes, while thriving in a PSD2 environment becomes much simpler through the use of flexible APIs. If, for example, a business wants to open an account, close it, exchange currencies or transfer money across the world, the processes can all be fully automated with APIs.

ON THE HORIZON

Tutsch highlights that Onpex will be expanding its services and products to continue meeting the needs of businesses in a rapidly changing landscape. For the first quarter of 2019, high on Onpex's agenda is connecting to clearing environments for cryptocurrencies.

The Opex platform not only provides banking and payments as a service, it also ensures that every movement and every development is happening in a regulatory-compliant space. By providing open and API-centred services, Onpex is at the forefront of the Open Banking revolution. ■



Christoph Tutsch, Onpex

SBERBANK POSTCARDS: ADDING 'EMOTION' TO PAYMENTS

With so many different options now available for making payments, it takes effort to stand out from the crowd. Russia-based Sberbank has decided to make the process a more visual affair, writes *Patrick Brusnahan*

Sberbank has updated its mobile app to bring about some very visual features. Sberbank Online now offers unique cash Postcards, which the bank believes can add a bit of “emotion” when paying relatives and friends.

The Postcards feature has been added to the Dialogues function in Sberbank’s mobile app. Images can have animation or sound, with multiple options including popular fictional characters or 1990s artists.

At the time, head of Sberbank’s digital platform division, Svyatoslav Ostrovsky, said: “At the beginning of the year, we launched Dialogues in Sberbank Online. It is quickly gaining popularity: users can now communicate, send unique stickers with SberCat and transfer money in the chat.

“Now we can give clients something more: the possibility to give emotions to relatives and friends. That’s why we have created unique cash Postcards and carefully included images of Russian culture in the digital environment.”

EMOTION

This was a natural progression, according to the Russian bank. Not only was it something it needed to do, but it needed to do it quickly.

Speaking to *EPI*, a Sberbank spokesperson says: “We spent less than six months putting Postcards together. This service is based on the Dialogues service that we launched in Sberbank Online in February 2018. Dialogues lets you communicate and send money in chat format; Postcards make it possible to do this with even more emotion.”

While adding Postcards to payments may be an attractive-looking option, is it something that would entice everyone? There are still large chunks of the world that do not use emojis, never mind fully animated images. So who is this feature for?

“Our client base includes most of the country’s population,” the spokesperson explains. “The Sberbank Online application is also widely used. For example, P2P transfers via Sberbank are the most popular way of

sending money in Russia. This is why, when we create services, we don’t focus on a specific, narrow audience, but instead make products for everyone.

“This applies to Postcards. When working on their UX [user experience] and content, we attempted to make the service as convenient and universal as possible. That’s why we used well-known characters from Soviet cartoons, 1990s pop stars, fairytale characters and laconic captions for Postcards.

“You can select a Postcard that suits any occasion, and if there isn’t any special reason, you can use one to simply brighten up the recipient’s day.”

RUSSIAN MOBILE BANKING

Sberbank’s mobile banking platform has achieved mass adoption, with its currently 37 million active users utilising the app for services such as balance checks, payments and transfers on both the iPhone and Android operating systems.

With such a large market, does Sberbank believe its new function will catch on with other players? Absolutely it does. The spokesperson says: “We believe that this format will catch on. We’re already seeing positive feedback in the few days after launch. Other players of the digital market always latch onto successful formats and integrate them into their services to benefit clients. We think this will happen with Postcards, too.”

Sberbank takes pride in its mobile app and monitors it carefully; this even extends to its rating on app stores.

“It’s one of the major feedback channels for us,” the spokesperson explains. “We monitor ratings and comments in app stores; we read every comment and act if necessary. For example, we compile a list of top-requested features based on feedback, and these serve as priorities for future releases. Our app is rated 4.8 out of 5 in the Apple App Store, which is an excellent rating, especially among banking apps.”

However, Sberbank does not see this as time to rest on its laurels, with more updates and features for the app incoming.

The spokesperson concludes: “We’ve started and will have launched self-made postcards by the end of the year. The future development of Postcards will depend on the users, their activity and wishes that we will take into account when planning.

“In terms of Sberbank Online in general, we have a lot of changes lined up, which we will talk about closer to the release date.” ■

RECENT IMPROVEMENTS TO THE SBERBANK APP

- The app launches faster;
- The main screen features useful recommendations: financial advice, personal offers, and the app’s user manual;
- The main screen search can be used to look for contacts for money transfers, organisations for payments, and the bank’s products;
- The updated Operation History shows a full transaction list, including purchases and money withdrawals, and
- Traffic fine payment has become more user-friendly: users can view new and paid fines, save data on their driver’s licence and vehicle ownership certificates, and check photos and locations on the map. ■

WORLD PAYMENTS REPORT: THE UNSTOPPABLE RISE OF NON-CASH PAYMENTS

The non-cash transaction volume is still growing worldwide, according to the *World Payments Report 2018*. What is more, the growth also shows no sign of slowing – in fact, it is actually speeding up. *Patrick Brusnaban* reports

Global non-cash transactions grew at a rate of 10.1% in 2016, according to research from Capgemini and French bank BNP Paribas published in the *World Payments Report 2018*.

From this rise, the global non-cash volume hit 482.6 billion. However, the chief drivers of this growth came from Emerging Asia (25.2% growth) and Central Europe, the Middle East and Africa (CEMEA) (17.1%).

In addition, developing markets recorded a rise of 16.5%. Fueled by government intervention to improve financial inclusion, countries such as India (33.2%), China (25.8%) and South Africa (15.1%) witnessed some remarkable growth in non-cash payments.

Growth is not limited to developing and emerging markets, however. Mature Asia-Pacific, North America and Europe saw an average growth rate of 7.1%.

Increases in non-cash are not set to slow down any time soon. The report predicts that non-cash transactions will accelerate at a CAGR of 12.7% globally between 2016 and 2021. Emerging markets will have an average CAGR of 21.6%.

Christophe Vergne, payments and world payments report leader at Capgemini, speaking to *EPI*, believes there will continue to be growth for a while yet. “We’ve been observing strong growth in the last 15 years we’ve been making the report,” he notes. “Growth has been actually accelerating in recent years. We were projecting a little bit over 10% last year, and this has accelerated by two points.

“When we look at the different markets, there is still growth and untapped potential. Our position is that growth will continue strongly; the plateau is far from being reached. Those lagging behind will accelerate and catch the leaders. This acceleration will continue for at least the next five years.”

He adds: “There’s no plateau in emerging markets. There was some slight plateau in China, but there are still two-digit-plus goals and they are still very strong. We are very confident that this industry will remain attractive.”

Currently contributing around one-third of non-cash transaction volume, by 2021, emerging markets contribute half of the total. To achieve that, emerging markets will grow at an exponential rate. Emerging Asia is expected to have a CAGR of 28.8%, driven by digital innovation, mobile payment adoption and financial inclusion initiatives.

REGIONAL DIFFERENCES

So why are certain regions, particularly Emerging Asia and CEMEA, performing better than others? Vergne’s explanation is pretty simple: “Emerging Asia’s success is partly down to population. It’s the largest region in the world.”

He continues: “As digital payments are now accessible, even for the non-banked population or people accessing tech through mobile, it opens a wide realm of opportunity. It is a two billion-person market equipped with mobile payments and mobile wallets: this is why it grows so fast.”

Another factor also made a huge impact: government influence. Jan Dirk van Beusekom, head of strategic marketing for cash management and trade finance at BNP Paribas, says: “What also help in those regions are the measurements local governments take to promote non-cash transactions. Very often this is linked to anti-corruption measures.”

One particular example brought up was the demonetisation of bills in India. The decision by the Indian government to cancel the legal tender of INR500 (\$7.50) and INR1,000 denomination notes, in an effort to tackle the country’s ‘black money’ issue, had widespread effects on the populace. It has also, two years later, pushed people towards digital payments and solutions.

Considering the sizable 1.3 billion population, electronic payments are not as much in vogue as one might expect. Cash accounts for 96.8% of the total payment transaction volume in India, a share that is expected to fall over the next five years.

According to GlobalData’s research, the annual value of card transactions is \$78.8bn, with an average annual spend per card of just over \$98. There is less than one card (0.63) per person, and an average of only 0.26 monthly card transactions per person. In contrast, China’s population has, on average, over four cards each, and Malaysia and Thailand have 1.71 and 1.52 respectively. So why the massive increases in CEMEA?

“They are the same, but different,” Vergne explains. “There are strongly growing markets in CEMEA, mainly Russia and South Africa. The difference is that Africa is strongly

growing in GDP; it's not only growing in digital, but in economy as well."

E-WALLETS

The global e-wallet transaction volume for 2016 is given as 41.8 billion in the report, comprising almost 8.6% of all non-cash transactions, and suggesting that there is plenty of market potential for big technology companies to expand. Google, Amazon, Facebook, Apple, Alibaba, and Tencent could all gain much more. 'Bigtech' already accounted for 71% of the global e-wallet market in 2016.

The report states: "These companies are leveraging their large-platform user base to make an impact in the payments space, focusing on providing seamless user experience and value-added features, and making use of network effects. Incumbents should learn from the bigtechs and invest in technology platforms in order to compete with them."

BIGTECH

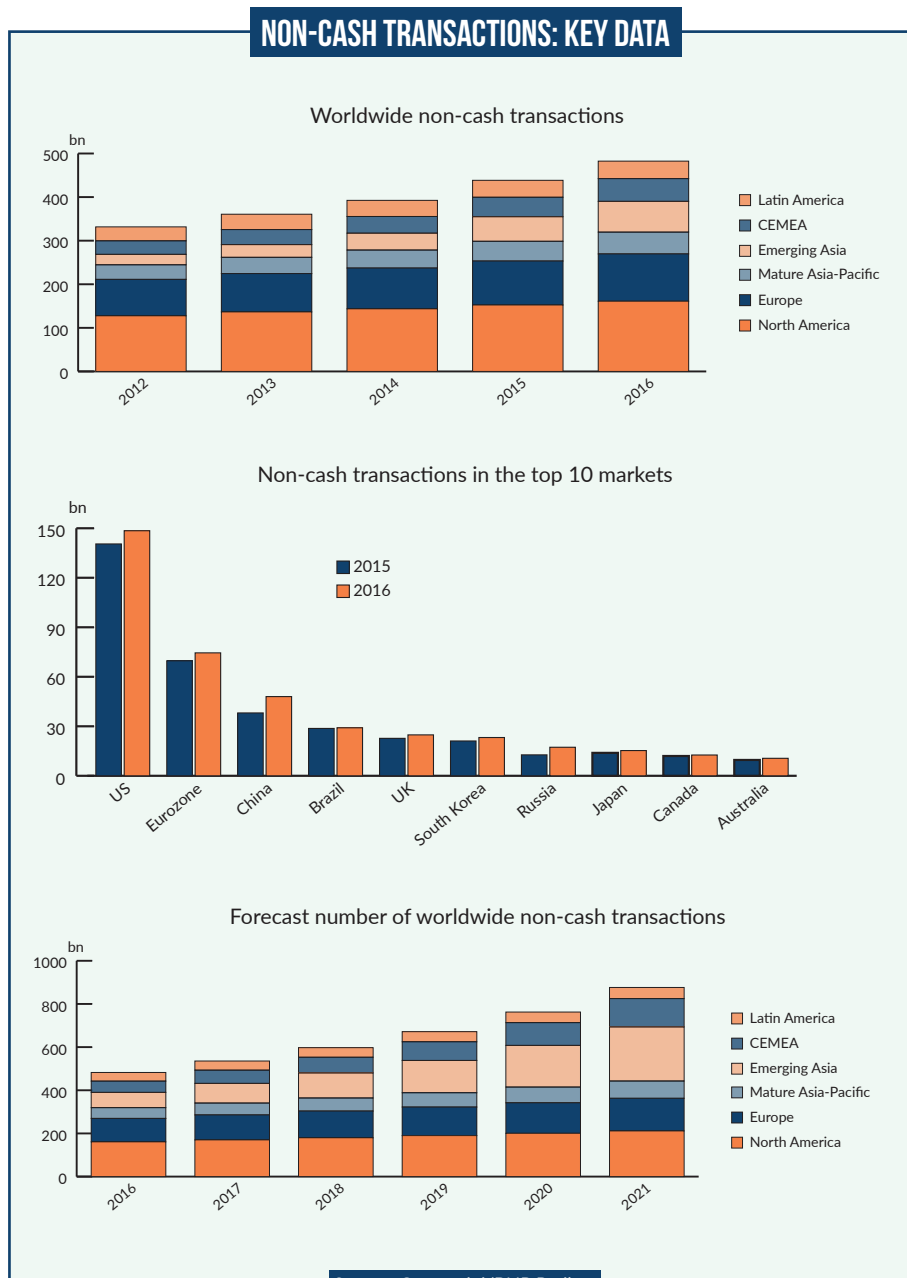
This rise in bigtech is reasonably sudden, and could be quite worrying for banks. How much market share will these companies gain?

Vergne says: "Firstly, we wanted to put a number on the market share of bigtech. It's essential, and they are close to 10% of the market. You must remember that this market is the official market. Three years ago, we measured what we called the 'grey' market, which were all these closed-loop solutions, which wasn't part of the banking industry but another 10-15% of the market. It's a proportion of payments outside of the banking world that is quite substantial.

"Also they have great reserves of data," Van Beusekom continues: "Bigtechs and fintechs have a different mindset first of all, but also up to now, they have been not subject to the same regulatory rules as banks have. That's a big reason why banks are lagging, but I think they are reacting currently. That's definitely something which has given the opportunity to bigtechs to gain some market share."

In addition, a large part of the bigtech market share is in China, with two of the world's biggest players: Alibaba and Tencent.

"Alipay and WeChat Pay represent a large share of the bigtech market, and they operate in a market where banks are totally deficient in providing efficient payment solutions. On this green field and on their platforms, Alibaba and Tencent were able to directly move to digital," Vergne explains.



Source: Capgemini/BNP Paribas

However, do banks really need to worry? Customers have relationships with companies such as Google and Amazon, but are they trusted? According to research from Bain, US consumers give Amazon much higher loyalty scores than they give banks. Among Amazon Prime respondents, nearly two-thirds would try a free online bank account from Amazon. Even people who do not purchase from Amazon would give it a go – well, 37% of them anyway.

Another aspect of this is that Amazon customers are considered to be valuable. They have a hold on 75% of US household wealth and make up 75% of the wealthiest households' assets.

According to Vergne: "The trust is different from the trust given to banks. Banks are still

the most trusted for data storage or cash handling. Bigtech will be trusted for customer orientation, customer service and maybe even for innovation. None of them have tried to replace banking services, but they go on top of existing services."

Van Beusekom adds: "Questions we see very often arise around the quality of service and the duration of the service.

"It's maybe not so much with bigtechs, but with fintechs. Consumers are overwhelmed with supply because there are so many and they are not used to it all and what part of the value chain they take up.

"There are other questions around fintechs: will they be around in two years' time? In that regard, banks are still trusted," Van Beusekom concludes. ■



COUNTRY SNAPSHOT: IRAN

Bank and government initiatives lead to robust card growth

Iran's payment card market recorded robust growth in terms of the number of cards in circulation, transaction volume, and value between 2013

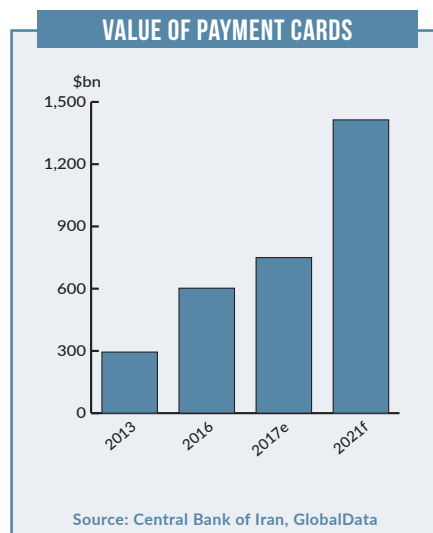
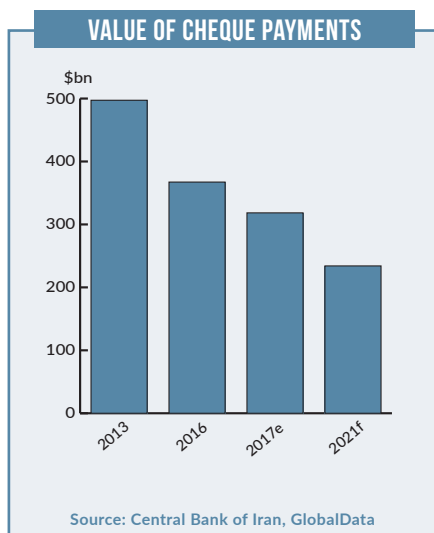
and 2017, primarily supported by government initiatives to encourage electronic payments and reduce consumer dependence on cash.

Consumers are now charged a fee for using cash to pay utility and mobile bills. In addition, many banks refuse to accept bill payments in cash, requiring consumers to use cards, and have installed barcode readers and POS terminals in branches to facilitate this.

Furthermore, many government organisations pay bonuses to employees in the form of gift cards, which can only be used to make purchases and not to withdraw cash.

These initiatives have also led to an overall increase in Iran's banked population. Consequently, the percentage of the population aged 15 or above with a bank account rose from 87.2% in 2013 to 95.8% in 2017.

The gradual adoption of contactless technology, supported by the increased availability of various alternative payment methods, is likely to drive the Iranian



payment card market's growth in the near future.

DEBIT CARDS DOMINATE

Debit cards accounted for 99.5% of the payment card transaction volume, and 99.4% of the transaction value in 2017. Consumer preference for debt-free payments and prudent consumer spending habits have resulted in the dominance of debit cards in terms of both transaction volume and value.

Growth was also supported by government efforts to encourage retailers to accept card-based payments, and banks' promotional activities to encourage retailers to install POS terminals.

Debit cards will continue to lead the Iranian payment card market, supported by the gradual migration of low-value cash payments to payment cards.

PAY-LATER CARD ADOPTION

While debit cards remain the dominant payment card type, consumer adoption and use of pay-later cards is growing at a brisk pace, primarily supported by a number of initiatives launched by the Iranian government.

Targeting low-income individuals, in April 2017 the government introduced a scheme called Yarakart, which enabled banks such as Bank Keshavarzi and Iran Post Bank to issue credit cards for the lower-income sector of the population.

Similarly, in April 2018 the government announced the launch of a new credit card project that will allow banks to offer credit card loans at lower interest rates for purchases of Iranian products.

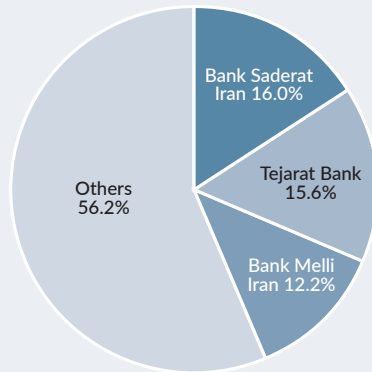
INTERNATIONAL SANCTIONS

The lifting of international sanctions against Iran is expected to encourage more foreign banks to expand operations there.

In 2016, following the implementation of the Joint Comprehensive Plan of Action for the development of Iran's banking system, the Central Bank of the Republic of Iran (CBI) partnered with numerous banks from countries including France, Austria, India, China, South Korea, Japan, Russia and Turkey.

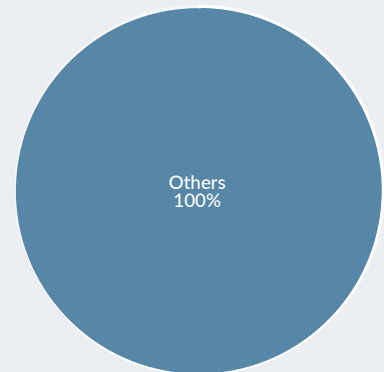
In August 2017, the CBI announced the integration of the local Shetab and Russian Mir card networks, which will allow Iranian

DEBIT CARD SHARES BY ISSUER



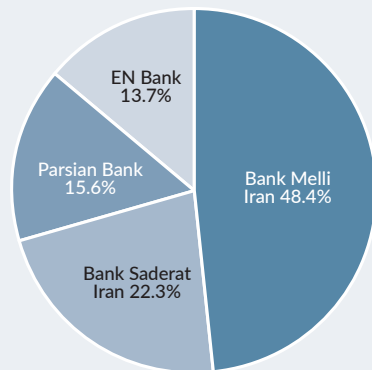
Source: GlobalData

DEBIT CARD SHARES BY SCHEME



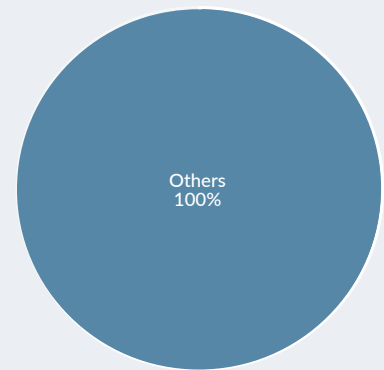
Source: GlobalData

PAY LATER SHARES BY ISSUER



Source: GlobalData

PAY LATER SHARES BY SCHEME



Source: GlobalData

payment cards to be used at Russian ATMs and vice versa.

ROBUST PREPAID GROWTH

There is substantial demand for prepaid gift cards in Iran, in both the retail and corporate markets, with demand particularly high during festival seasons.

All major banks, such as Keshavarzi Bank, EN Bank, Pasargad Bank and Bank Melli Iran, offer gift cards, which can be obtained for retail and corporate customers without an account.

To take advantage of the growing e-commerce market, banks such as Bank Mellat, EN Bank, Bank Pasargad and Parsian Bank offer prepaid cards for online shoppers, encouraging customers to use e-banking services to pay for utility bills and online shopping.

As an example, Bank Mellat offers a prepaid card that can be used for online shopping and to pay utility bills. It features

a three-digit CVV code, and the card is deactivated if the code is entered incorrectly three consecutive times.

CARD ACCEPTANCE AT POS

The number of POS terminals recorded a CAGR of 18.3% between 2013 and 2017, and is anticipated to reach 8.6 million by 2021.

The transaction volume at POS terminals increased significantly from 5.6 billion in 2013 to 16 billion in 2017, at a CAGR of 30.2%, while the transaction value increased from IRR10.6bn (\$294.38bn) in 2013 to \$749.67bn in 2017 at a CAGR of 26.3%.

Contactless POS terminals are also gaining prominence in the country. According to Tehran-based payment solution provider Sadad, the company has installed 650,000 POS terminals in Iran, of which 150,000 are equipped with NFC technology. ■

COUNTRY SNAPSHOT: URUGUAY

Government measures lead to gradual shift from cash

Uruguay saw a gradual shift towards electronic methods of payment during 2013-2017, with the government taking steps to promote electronic payments and reduce dependence on cash.

A major milestone was the financial inclusion programme, through which 850,000 bank accounts had been opened by December 2017; as a result, the percentage of the Uruguayan population aged 15 or above with a bank account rose from 38.1% in 2013 to 61.0% in 2017.

Initiatives such as reductions in interchange fees and VAT on debit and credit card transactions, as well as subsidies for POS installations and restrictions on cash, also encouraged electronic payments.

Uruguayan consumers are more likely to hold a credit card than a debit card. However, debit cards registered strong growth in terms of transaction volume and value, with respective CAGRs of 27.1% and 17.3%.

Debit cards accounted for 75.7% of the total card transaction value. However, cash withdrawals at ATMs accounted for 78.2%

of the total debit card transaction value in 2017.

Restrictions on cash and reduced interchange fees have resulted in a significant rise in debit card use. Debit cards registered significant growths in terms of both transaction volume and value at the POS, with respective CAGRs of 107.7% and 100.4%. Government restrictions on certain transaction types are also expected to encourage debit card use.

Pay-later cards accounted for 24.3% of the total card transaction value in 2017, with these cards generally targeted at high-income and working consumers.

Uruguay's nominal GDP per capita stood at \$17,345.92 in 2017, which is among the highest in Latin America.

All major banks now offer premium cards. For salaried individuals, Santander offers the Visa International credit card with no annual fee for the first year, as a part of its Full Inclusion salary account package.

Many banks also offer customised credit cards for businesses. Scotiabank, for example, offers the Visa and Mastercard Corporate credit cards.

The prepaid card market registered robust growth in terms of both the number of cards in circulation and transaction value. The prepaid card transaction value rose from UYU2.6bn (\$90.21m) in 2015 to \$927.07m in 2017. With government focus on increasing financial inclusion, prepaid issuers are offering cards for working individuals to receive monthly salaries.

The number of POS terminals grew from 25,299 in 2013 to 58,817 in 2017, at a CAGR of 23.5%.

To encourage merchant adoption of POS systems, the government offered tax benefits between August 2014 and December 2017 for merchants investing in POS terminals, accessories and billing systems. ■

PAYMENT CARDS BY TYPE (MILLION)

	DEBIT	PAY LATER
2013	1.9	2.6
2016	2.4	3.0
2017e	2.7	3.2
2021f	3.6	3.7

Source: GlobalData

CARD TRANSACTION VALUES BY CHANNEL (\$ BILLION)

	ATM	POS
2013	9.7	3.1
2014	11.0	3.9
2015	12.0	5.3
2016	13.0	6.9
2017e	14.8	9.0
2018f	16.5	11.2
2019f	18.2	13.4
2020f	19.7	15.6
2021f	21.2	17.4

Source: GlobalData

CARD TRANSACTION VOLUMES BY CHANNEL (MILLION)

	ATM	POS
2013	64.3	81.4
2014	68.5	96.4
2015	71.9	124.7
2016	75.4	161.3
2017e	77.4	225.2
2018f	79.1	296.0
2019f	80.6	369.2
2020f	81.8	441.2
2021f	82.7	500.8

Source: GlobalData

NUMBER OF ATMS AND POS TERMINALS (THOUSAND)

	ATM	POS
2013	1.2	25.3
2014	1.4	35.4
2015	1.5	43.5
2016	2.2	48.8
2017e	2.3	58.8
2018f	2.4	67.5
2019f	2.5	74.8
2020f	2.5	80.6
2021f	2.6	85.6

Source: Central Bank of Uruguay, GlobalData

COUNTRY SNAPSHOT: AZERBAIJAN

Underdeveloped card payments a government focus

Azerbaijan is a cash-oriented economy with a high unbanked population, low financial awareness, and inadequate payment infrastructure. This is hindering the development of its financial system, including payment cards, which remain at a nascent stage.

In comparison to peer countries Poland, Russia, Ukraine, Romania, Turkey and Kazakhstan, Azerbaijan has the lowest card penetration and frequency of use. However, with government initiatives to increase awareness of non-cash payments through financial literacy programmes, a strategy to develop financial services, cash withdrawal fees, and new regulations limiting cash transactions, payment cards are anticipated to gain traction, recording CAGRs of 11.1% and 11.4% respectively in terms of transaction volume and value for the period 2017-2021.

The primary use of debit cards is for distributing payroll and social payments. All major banks offer payroll cards for employees, and the government distributes social benefits such as pensions and social insurance through banks, under

the State Social Protection Fund. This has encouraged many banks to offer social cards to senior citizens to enable them to withdraw their monthly pensions.

According to central bank data, the number of social cards stood at 2.5 million and salary (debit) cards stood at 1.8 million as of January 2018, constituting 74.8% of the total number of debit cards.

Pay-later cards in Azerbaijan had a penetration rate of just 6.3 cards per 100 individuals in 2017. The number of cards in circulation and the transaction value both fell in the past five years, largely as a result of low consumer awareness of the benefits of credit cards, and high costs of lending. The availability of credit facilities on debit cards also reduces the need for a

separate credit card. Banks are, however, encouraging credit card use through benefits such as instalment payments.

Azerbaijan's e-commerce market grew significantly from AZN2.6m (\$1.5m) in 2013 to \$22.6m in 2017, at a CAGR of 96.2%. The proliferation of mobile internet use is a key driver of e-commerce growth, and many banks now offer payment cards exclusively for online purchases. Examples include Kapital Bank's Visa Virtual card, and IBA's Visa Internet card and Mastercard WebCard. Alternative solutions such as PayPal, Wallet One and Azerpay will also boost e-commerce over the next five years.

The number of POS terminals recorded a CAGR of 18.4%, rising from 33,285 in 2013 to 65,471 in 2017. The government announced plans to introduce the Single POS Terminal project in 2018, allowing merchants to accept all payment cards at a single POS terminal, irrespective of issuer.

In December 2017, the central bank installed POS terminals at the state agency ASAN's service centres, enabling individuals to make card payments via the government payment portal. ■

PAYMENT CARDS BY TYPE (MILLION)

	DEBIT	PAY LATER
2013	4.7	0.9
2016	4.7	0.6
2017e	5.2	0.6
2021f	7.0	0.7

Source: GlobalData

CARD TRANSACTION VALUES BY CHANNEL (\$ BILLION)

	ATM	POS
2013	5.4	0.7
2014	6.2	0.8
2015	6.5	0.8
2016	6.6	0.9
2017e	7.6	1.1
2018f	8.6	1.2
2019f	9.7	1.4
2020f	10.7	1.5
2021f	11.7	1.7

Source: GlobalData

CARD TRANSACTION VOLUMES BY CHANNEL (MILLION)

	ATM	POS
2013	54.9	12.9
2014	65.4	13.8
2015	71.0	14.2
2016	69.9	13.5
2017e	80.4	16.4
2018f	91.0	19.6
2019f	101.2	22.8
2020f	110.2	26.0
2021f	118.7	28.8

Source: GlobalData

NUMBER OF ATMS AND POS TERMINALS (THOUSAND)

	ATM	POS
2013	2.4	33.3
2014	2.6	73.0
2015	2.7	80.3
2016	2.5	71.8
2017e	2.4	65.5
2018f	2.4	63.4
2019f	2.5	64.2
2020f	2.5	65.6
2021f	2.6	67.6

Source: Central Bank of Azerbaijan, GlobalData

REAL-TIME PAYMENTS: TAMING THE NEW MONSTER OF FLOW

As the world adopts real-time payments, creating massive volumes of instantaneous transfers in seconds, the challenge for banks has evolved from managing liquidity to managing velocity, writes Standard Chartered CIO *Bhupendra Warathe*

Digitisation is driving the growth and future of real-time payments.

In Singapore, funds transfers between two local accounts can be done almost instantly. Hong Kong, which launched its near-instant payment scheme this month, may see bank-to-bank transfers completed just as quickly.

Such payments have not only created the need for 24/7 funds flows, but also at higher frequencies. As a result, payments and treasury departments can no longer adhere to batch and daily processes, and the need to move to real-time systems is urgent.

While most of the development in fast payments has focused on domestic transfers between individuals with a capped sum, in some jurisdictions participants have included non-bank businesses such as remittance providers and e-commerce players.

With the current pace of implementation, it is a matter of time that cross-border instant payments is fast becoming a reality. Just earlier this year, SWIFT held exploratory talks with banks from the Asia-Pacific region about the development of an Asia-Pacific cross-border real-time payments system based on SWIFT global payment innovation.

Demand for instant liquidity, dynamic FX exposure management, as well as the ability to process real-time cash flow and transaction data, mean banks have begun to deploy the combined strength of distributed ledger technologies, artificial intelligence and application programming interfaces (APIs) to transform into a highly effective, high-performing and value-added banking service for clients.

The speed of real-time payments also makes it vital for banks to perform instant fraud



Bhupendra Warathe, Standard Chartered

and identity checks before the payment is sent. At Standard Chartered, these systems are supported by as many as 12,000 coders and technologists, and they now account for about 15% of the workforce. The numbers also underline the extent to which banking has become a digital business.

SPEED AND AGILITY

As we move forward, speed and agility are two critical factors driving success. In the past, software upgrades took place once every a few months, but with the rapid changes in today's environment, the development of software, upgrades and deployment need to happen at a much faster pace.

Development operations is one way to deploy software into the production environment more quickly. With this approach, testing and deployment processes are fully automated. New code is dropped into production while the system with the previous codes will still function, allowing the end user to continue using the services.

A rapidly changing environment has also caused banks to turn to partnerships to help them adapt quickly. In recent years, the concept of open APIs has become increasingly prominent in our industry. In the next three to five years, we project a massive integration of service providers' platforms, with banks leading the charge.

Open API-led transformations will enable banks to accelerate collaborations with outside organisations and third-party developers. Increased co-created systems will allow banks to redraw the boundaries of the products and services they offer.

With ever-changing consumer needs, agile ways of working can help banks embrace new requirements. Agile software development, an approach based on iterative development that brings together small, cross-functional teams to develop solutions within weeks rather than months, allows a product to go live sooner. At the same time, a project that is not on track could 'fail fast', allowing the team to recalibrate and take a different course quickly.

The prevalence of technology in every aspect of our lives also means that IT cannot be a department that sits on its own in a corporation. As banking becomes a seamless digital process, IT professionals are now integrated with every banking department.

At Standard Chartered, besides having IT professionals across our 60 markets, four Centres of Excellence – two in India, one in Malaysia and one in China – support and provide expertise for our global operations. IT teams are now closely integrated with respective product and client solution teams for agile delivery.

Talent and resources are critical for any strategy. Besides having the best talent, there is also a need to be faster and more scalable. There is a progressive shift to cloud-based infrastructures which can connect with multiple platforms such as those of industry-specific clearing houses, e-commerce platforms, large commercial and government institutions.

Without a doubt, real-time payments are redefining the banking landscape. In the next few years, there will be a multi-fold increase in volumes, with clients expecting 24/7 availability and scalability to handle peaks and troughs.

We foresee intense competition for talent and resources – not just in the banking industry, but also with tech firms and telcos. A survival of the fastest, the organisations that can react to the change the fastest will be the true winners. ■

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SHAPE THE FUTURE OF PRIVATE BANKING

Private Banking & Wealth Management: Switzerland 2018

12th December 2018 • Marriott, Zurich

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

Key Issues :

- Economic trends to 2020. Wealth management industry performance
- With technology playing an increasingly significant role in service delivery what benefit does institutional size confer?
- What are the implications for service, delivery and product distribution in the age of the digital wealth manager?
- How is technology enabling faster, more cost effective on-boarding, KYC and compliance reporting among wealth management organisations?
- How should Switzerland's private banking industry define itself in the age of digital technology and intensifying competition?
- What channels are working for attracting, retaining and managing an increasingly diverse customer universe?
- What's the connection between distribution and profitability? How are Swiss private banks adapting to the challenge of tight margins and higher costs?
- What does the country need to do to stay ahead?



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SHAPE THE FUTURE OF RETAIL BANKING

Retail Banking: Europe 2018

28th November 2018 • Hesperia Hotel, Madrid

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

Key issues:

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



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