

### Retail Payments Innovation Global Industry Radar (GIR)

Competitively advantaged access to innovations and critical developments in Retail Payments Innovation from ICG's unique global scanning capability



### **Retail Payments Innovation GIR – In this edition**

Introduction	An introduction to this edition and the featured contents	<u>3</u>
Top retail payments innovation themes	A snapshot of the top current payments industry themes	<u>6</u>
Regulatory Update	A summary of key regulatory developments impacting the payments sector	<u>60</u>
Key developments by region	Organised by region, a review of payments innovation and other notable news	<u>65</u>
North America		<u>66</u>
South & Central America		<u>78</u>
Europe		<u>82</u>
Africa & Middle East		<u>98</u>
Asia		<u>101</u>
Australia & New Zealand		<u>111</u>
How we rate Innovation Quotient & Industry Impact	An explanation of how we rate the Innovation Quotient and Industry Impact across this GIR	<u>118</u>
From the Insights Review	Some topical payments article from ICG's periodic Insights Review	<u>119</u>
More information from ICG	More information about ICG and the ICG Payments Practice	<u>121</u>
Report contributors and subscribers	Information about report contributors and the subscriber organisations for this GIR	<u>126</u>

#### **Retail Payments Innovation GIR - Introduction**

#### Welcome

Welcome to the third edition of ICG's **Retail Payments Innovation Global Industry Radar**. Published three times each year this title is one of the growing number of Global Industry Radars (GIRs) produced by ICG to provide advantaged access to insights, innovations, developments and key sectoral activities across the globe.

Available exclusively to one subscriber in each geography this GIR provides comprehensive worldwide coverage of what you and your team need to know about developments in the Retail Payments space. Information is assimilated from a wide array of publically available sources and is curated by a team of subject matter experts drawn from ICG's global network of Affiliates.

#### In this edition

This edition covers developments from **January 2016 to July 2016** together with some updates on developments reported in previous editions.

Each GIR also serves as a springboard to other areas of support from ICG. Should you require further information on any of the developments featured there are a number of easy ways this can be done:

- (1) ICG's Certified Case Study (CCS), Focused Knowledge Brief (FKB) and Knowledge Area Review (KAR) all provide different levels of deep dive analysis and can easily be commissioned by contacting ICG.
- (2) The GIR contributors and I are also available to provide further insights on any of the topics covered and
- (3) leveraging the power of the exclusive GIR subscriber base you can also use each GIR edition as the basis of facilitated global discussions with your non-competitive international peers.

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#### **Retail Payments Innovation GIR - Introduction**

#### **Top Themes**

This edition of the GIR is grouped into nine top themes, seven carried over from the last edition, one updated and one new addition. We report **continued significant innovation from domestic debit card and payment schemes**. Notably Interac in Canada has achieved a number of domestic debit 'firsts' proprietary token generation and management service, being the first domestic debit scheme to be offered as part of Apple Pay and collaborating internationally with BankAxept, Norway's domestic debit network. More worryingly we also report of the acquisition of Vocalink in the United Kingdom by MasterCard placing the international card scheme at the heart of the United Kingdom's payments infrastructure.

The **international card schemes continue to be active on many fronts** and in addition to various innovations we note a number of joint ventures especially from JCB and UnionPay as they extend into many new international markets.

The first half of 2016 has also seen the continued 'battle of the pays' as Apple, Google and Samsung expand their international footprint, however these are not without their challenges as Apple's limited foray into Australia shows.

Alongside the big three technology players we report on a **range of other wallet developments** as they via for consumer adoption in an increasingly crowded marketplace.

**Real Time Settlement news** also features as established markets such as the United Kingdom seek to open access to challenger and secondary players and other countries embark on their own faster payment plans.

We report **continued activity in the international remittances market** and highlight the recent tie up between Barclays Bank in the united Kingdom and Commonwealth Bank of Australia as they link their respective mobile banking apps in a bid to retain a share of the international remittance market that is being picked up by a number of new entrants and specialist providers.

Innovative developments in **point of sale** and across **fintech** are also features as is for the first time a series of stories about growing interest in **wearable payments**.

#### **Retail Payments Innovation GIR - Introduction**

#### **Regional and Other Developments**

As previously, we also present these top themes organised by geography.

A regional map provides a snapshot of some of the major developments in each geography with subsequent pages providing more detailed information.

#### Source information

Remember to delve deeper into any item through online articles or other materials, click on the

Article buttons.

The button will take you to original source information, often press releases or other information from the organisations that feature in the news. The links are valid at time of publication, but as news is archived or websites updated may not always remain current. Internet searches will often yield additional information or different perspectives on the news we report.

We trust that you find this Global Industry Radar topical, informative and thought provoking and welcome your feedback to help us refine future editions.

K Paul Blond, Global Lead Author – August 2016 (paul.blond@internalconsulting.com)

# Top retail payments innovation themes in this edition

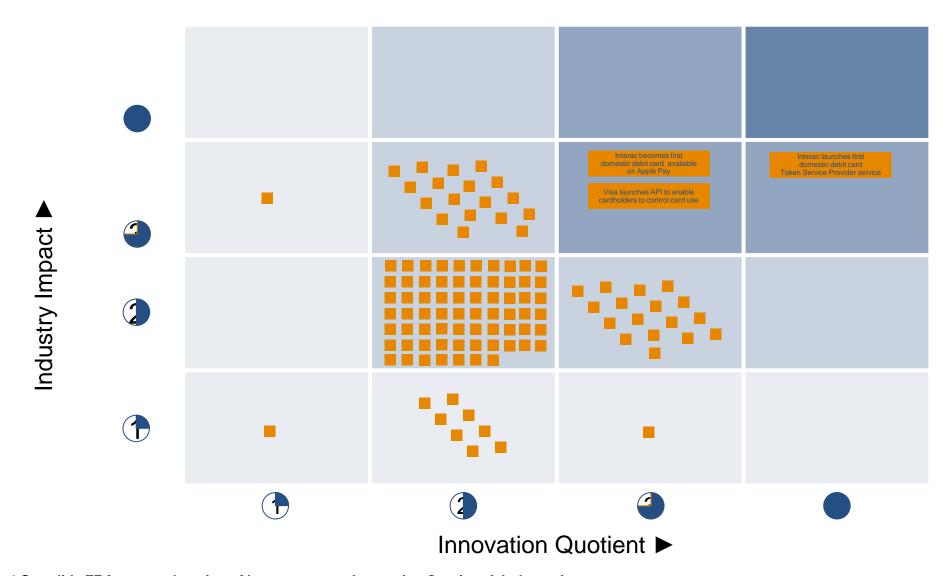
In this section we identify the current top payments industry themes and for each theme report some of the most pertinent examples from around the world. Each news story is rated for innovation and impact.



#### Top retail payments innovation themes in this edition

Significant innovation from domestic Continued activity in the debit card / payment schemes international remittances market **Active programme of innovation** A range of new POS / mobile POS from the major card schemes / devices brought to market payments providers Fintech and blockchain Major technology players extend their footprint, but not without challenges developments A range of other wallet developments **Growing interest in wearable** via for consumer adoption payments Real Time Settlement / Faster Payment Services continue to gather momentum

#### Top retail payments innovation themes in this edition – summary of ratings in this section



<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top themes in this edition – O Significant innovation from domestic debit card / payment schemes



### Top retail payments innovation themes in this edition - Significant innovation from domestic debit card / payment schemes - 1



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
CANADA – Interac introduces tokenisation service	Interac has launches its Token Service Provider (TSP) service a first for a domestic debit network globally. The proprietary token generation and management service enables financial institutions, merchants and partners to build and manage secure digital payment experiences. The TSP was developed in collaboration with IBM, Bell ID and Everlink.			Article
O CANADA – Interac becomes first domestic debit card to connect to Apple Pay	Interac has become the first domestic debit card globally to be included in Apple's Apple Pay wallet. Following a May launch with Canadian banks CIBC and RBC the service has now been rolled out to other leading banks enabling Interac debit card customers to use Apple Pay to buy goods and services in the hundreds of thousands of Canadian stores that already accept contactless payments.			Article
O CANADA/ NORWAY – Interac secures first international licence for its contactless and mobile debit solutions	Interac plans to collaborate with BankAxept, Norway's domestic debit network to help accelerate the rollout of contactless and mobile debit solutions in Norway. The licensing agreements will help enable BankAxept to deliver a secure and cost-effective contactless point-of-sale solution in Norway. This is the first Interac payment solutions client and demonstrates the potential for regional debit card company co-operation.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition - Significant innovation from domestic debit card / payment schemes - 2



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
DENMARK – Carta Worldwide and Nets partner to offer secure mobile payments	Carta Worldwide and Nets Group have announced a partnership that brings secure mobile payments solutions to banks across Northern Europe. As part of the partnership Carta will deliver its Token Processing Appliance (TPA) to processors, networks and large issuers. The service is designed to be compatible across mobile payment solutions and supports both global and local payment schemes.			Article
DENMARK – Nets and JCB partner to drive mobile payments in Denmark	Nets and JCB have entered into a partnership agreement which will allow Nets to use J/Speedy, JCB's contactless technology, for Dankort payments with smart phones. As a result of the partnership agreement Nets will, with support from terminal vendors and integrators, gradually prepare Danish terminals to accept payments with Dankort via mobile phones. Once this is in place, JCB card members can benefit from making J/Speedy contactless payments when visiting merchants in Denmark that accept JCB cards.			Article
NETHERLANDS -     Dutch banks' Ideal     payments platform     reports soaring     growth	The iDEAL online payment product (iDEAL is a standard payment method for making secure online payments directly between bank accounts operated by the Dutch Banking Association) reported record usage in 2015 with more than 222M transactions being made a 23.2% year-on-year increase.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition – Significant innovation from domestic debit card / payment schemes - 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
RUSSIA –     45 Russian Banks     have now joined MIR     domestic payments     system	The Central Bank of Russia continue to report growing interest from domestic banks to join the MIR domestic payments system timetabled for launch at the end of 2016. The Central Bank reports that "45 banks had already joined including the biggest ones such as Sberbank and Alfa"			Article
UNITED KINGDOM     MasterCard agrees     GBP700M VocaLink     acquisition	MasterCard has announced acquisition of a 92.4% stake in VocaLink Holdings Limited for about GPB700M (~USD920M) Under the agreement, a majority of VocaLink's shareholders will retain 7.6% ownership for at least three years. Based in London, VocaLink operates key payments technology platforms on behalf of UK payment schemes, including BACS – the Automated Clearing House (ACH), Faster Payments – the real-time account-to-account service and LINK – the UK ATM network. In addition, VocaLink licenses its software and provides services to support ACH activities in Sweden, Singapore, Thailand and the United States. The deal will see MasterCard to acquire one of the U.K.'s most important domestic payments providers.			Article
<ul> <li>UNITED KINGDOM         <ul> <li>PayPort by</li> </ul> </li> <li>VocaLink awarded vendor accreditation from Faster</li> <li>Payments Scheme</li> </ul>	PayPort by VocaLink an end-to-end service that offers banks and other financial institutions fast, efficient and secure access to Faster Payments without the cost of introducing a new technology infrastructure, has gained Vendor Accreditation from Faster Payments Scheme Limited (FPSL). FPSL claims the new technical accreditation service will level the playing field for access to the Faster Payments service.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# $Top\ retail\ payments\ innovation\ themes\ in\ this\ edition-\\ Significant\ innovation\ from\ domestic\ debit\ card\ /\ payment\ schemes\ -\ 4$



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul><li>UNITED KINGDOM</li><li>Vocalink signs deal with UnionPay International</li></ul>	VocaLink has signed a five year deal with UnionPay International enabling UnionPay cardholders to access ATMs in the UK and continental Europe. Under the deal, VocaLink will provide ATM transaction processing and UnionPay sponsored access, providing acquirers with a fast go to market solution. UnionPay observed that on average, the value of UnionPay card withdrawals from UK ATMs are five times the average value of UK ATM withdrawals.			Article
INDIA –     NPCI rolls out     Unified Payments     Interface	The National Payments Corporation of India (NPCI) has launched a new Unified Payments Interface (UPI) to help facilitate the country's push to electronic money. The UPI will generate a virtual address as a payment identifier for sending and collecting money over the counter and online and works on single click two factor authentication. It also provides an option for scheduling push and pull transactions for various purposes like sharing bills among peers. Customers will be able to have multiple virtual addresses for multiple accounts in various banks.			Article
INDIA –     NPCI Extends RuPay     Debit card	NPCI has rolled out RuPay Debit services to over 200 District Central Co-operative Banks (DCCBs) under RuPay Debit Card network which now digitises about two-thirds of 675 districts in the country through its network of Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks and Scheduled Cooperative Banks with electronic payment mechanisms.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### Top retail payments innovation themes in this edition – Significant innovation from domestic debit card / payment schemes - 5



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
MALAYSIA –     MyClear to set up     new retail payment     platform	MyClear, a wholly-owned subsidiary of Bank Negara Malaysia (BNM), has announced the development of a new real-time retail payments platform which is expected to launch in 2017. The enhanced Real-Time Gross Settlement System (RENTAS) will cater for multiple messaging formats including the internationally-recognised ISO 20022.			Article
SINGAPORE –     NETS rolls out small business e-     commerce solution	NETS has rolled out its NETS eCommerce solution, a tie-up with local system integrator, Global Interactive Works, which will enable Singapore retailers to set up online shop fronts instantly with pre-integrated payment options. This new solution, which is targeted at brick-and-mortar businesses, is designed to offer SMEs an affordable and seamless online system.			Article
SINGAPORE –     NETS launches     Android top up     service	Motorists can now top up their NETS FlashPay and Autopass Cards on their Android smartphones. Using the NETS FlashPay Reader app, motorists will no longer need to worry about looking for a top-up terminal for their NETS FlashPay cards to pay for their ERP and parking charges. Previously, foreign motorists could only top up their Autopass Cards at specific top-up locations in Singapore. With this new top-up feature on the app, foreign motorists can use credit cards issued by Singapore or Malaysian banks to top up their Autopass Cards on the go.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top retail payments innovation themes in this edition – Significant innovation from domestic debit card / payment schemes - 6

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SINGAPORE –     NETS signs deal with     Australian Mint for     mPOS	Australian payments processing technology provider Mint Payments Limited has signed a strategic partnership agreement NETS to boost Mint's expansion in Asia. The 5 year deal includes development and launch of Singapore's first NETS branded unified mPOS solution, licensed by Mint, that will enable merchants to accept all major credit cards and NETS debit cards as well as establishing a new acquiring partnership for Mint and its channel partners in Singapore, such as ABSS (MYOB Asia), using Mint's omni-channel payments solution.			Article
THAILAND – TB 100m (~USD3m) budget set by ITMX for national payment scheme	Thailand's NATIONAL ITMX will allocate a budget of around Bt100 million to provide an interface for banks so they can access and manage information as part of preparation for a national e-payment system to be developed under a 5 year deal with VocaLink. The Bank of Thailand will be the coordinator of the system with the National Broadcasting and Telecommunications Commission and the Interior Ministry, as they will synchronise mobile-phone numbers and personal identity cards.			Article
NEW ZEALAND – Paymark launches paperless receipt app	Paymark has launched an application called Paypr which provides receipt data digitally. When a card that has subscribed to the service – at a cost of NZD per month per user - Paypr generate a digital receipt in real time which is sent directly to cardholders Xero account removing the reliance on collecting paper receipts to manage expenses.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



Top themes in this edition –
2 Active programme of innovation from the major card schemes / payments providers



#### Top retail payments innovation themes in this edition – Active programme of innovation from the major card schemes / payments providers - 1

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
WORLDWIDE – VISA issues API to offer consumer control over card transactions	Visa is introducing a new service enabling issuers to empower consumers to monitor and control how, where, and when their Visa credit, debit, and prepaid accounts can be used. Visa issuers will be able to offer consumers a variety of transaction controls that are easily customized to meet their specific needs. For example, spending controls can be applied to different transaction types, date ranges, or overall card spending to offer consumers visibility and control over their money. Alerts can be sent by text, mobile app, or email in when transactions take place.			Article
<ul> <li>NORTH AMERICA</li> <li>BMO and</li> <li>MasterCard</li> <li>roll out first</li> <li>Biometric Corporate</li> <li>Card Program</li> </ul>	BMO Financial Group and MasterCard have launched the first biometric corporate credit card program in Canada and the U.S. enabling cardholders to verify transactions using facial recognition and fingerprint biometrics when making online purchases. Beginning with corporate cards issued to BMO employees the MasterCard Identity Check mobile app will prompt participants to scan fingerprints or snap selfies to validate their identities via biometrics; and when verified, return to the merchant site to complete the online purchase.			Article
MEXICO – Cuallix and UnionPay issue first UnionPay card in Mexico	UnionPay and Mexican issuer Cuallix bring first UnionPay cards to Mexico. China is the second largest trade partner of Mexico, and the two countries have established a comprehensive strategic partnership of cooperation. More than 80% of ATMs and 100,000 merchants in Mexico accept UnionPay cards.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition - Active programme of innovation from the major card schemes / payments providers - 2

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<b>2</b> UNITED STATES - Industrial and Commercial Bank of China (US) issue first UnionPay in U.S.	UnionPay and Industrial and Commercial Bank of China (US) (ICBC US) have issued the first UnionPay credit card in New York. It's both the first UnionPay credit card issued in the US market and the first credit card issued by a Chinese commercial bank in the US. So far, UnionPay International has worked with ICBC to issue cards in more than 20 countries and regions such as Canada, New Zealand and Singapore.			Article
UNITED STATES – Citi acquires Costco Amex portfolio	Citi has signed an agreement with American Express to acquire Costco's U.S. co-brand credit card portfolio. The transaction is expected to close in mid-2016 at which time Citi will begin issuing Costco credit cards. Citi is currently working with Costco to provide a new value proposition to its 51 million members.			Article
UNITED STATES – VISA takes major stake in Square	Square Inc has. revealed that Visa holds about 4.19 million of Square's Class B shares, which don't trade publicly. Visa has the option to convert those shares to as much as 3.52 million Class A shares, currently equal to a 9.99% stake in the publicly traded share class. Visa, hasn't historically acquired companies like Square. Analysts commented that the disclosure "served as a vote of confidence" in Square's business and "a reminder of Square's attractiveness as an acquisition target."			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top retail payments innovation themes in this edition - Active programme of innovation from the major card schemes / payments providers - 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
2 CUBA – BISCA and UnionPay launch first UnionPay card in Cuba	In another international joint venture increasing its global footprint UnionPay International has announced a deal with RED.S.A, an acquirer in Cuba, to issue the first UnionPay card in the country through RED.S.A's partner BISCA. This is the first international card brand to enter the local market.			Article
EUROPE – VISA Expands Tokenisation service	Visa Europe has expanded its Visa Europe Payment Tokenisation Service (VEPTS) enabling financial institutions and others to integrate tokenisation into services where payment credentials are stored in the cloud such as banks' own mobile payment apps plus a wide variety of wearable and other 'connected' devices, Internet browser-based wallets and retailer-specific checkout offerings such as Visa Checkout and card on file payment options. This widens Visa Europe's existing support for mobile payment experiences relying on the storage of payment credentials on a mobile device.			Article
② GERMANY – PayCentre and JCB launch first JCB card in Germany	JCB, PayCenter GmbH, a leading German prepaid card issuer, and petaFuel, a card processor of PayCenter have introduced the first JCB-girocard co-badged card in Germany. The product named "CardDuo" is a prepaid card which combines the functionalities of JCB alongside girocard (payment scheme operated by the German Banking Industry Committee). The brand-new product is not only the first prepaid card co-badged with girocard, but becomes the first JCB prepaid card issued in Europe.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# $Top\ retail\ payments\ innovation\ themes\ in\ this\ edition-\\ Active\ programme\ of\ innovation\ from\ the\ major\ card\ schemes\ /\ payments\ providers\ -\ 4$

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
2 ITALY – JCB and Unicredit establish merchant acquiring partnership	In another move, JCB and UniCredit have launched a partnership that will broaden JCB card acceptance in Italy for tourism and business. The deal enables the use of JCB cards at UniCredit ATMs and Italian merchants who are clients of the banking group, significantly increasing JCBI's presence in the Italian market and offering more choices to UniCredit customers.			Article
NETHERLANDS – MasterCard tests 'selfies' biometric authentication ahead of international rollout	MasterCard reports that following a 750 strong cardholder trial by Dutch Bank ABN Amro biometrics payment pilot participants prefer fingerprints and facial recognition authentication to passwords. Nine out of 10 participants indicated that they would like to replace their password with biometric identification. The company plan extending the technoolgy to North America and parts of Europe later in 2016.			Article
SOUTH AFRICA – Bank of China and UnionPay issue first UnionPay Card in South Africa	Bank of China Johannesburg which in July 2015 was nominated as the first cross border Renminbi clearing bank on the African Continent has issued the first prepaid UnionPay card in South Africa.			Article
<ul> <li>UNITED ARAB</li> <li>EMIRATES –</li> <li>UnionPay launch</li> <li>secure enhanced</li> <li>prepaid salary card</li> </ul>	Dubai based Mint Group founded in 2009 -certified by Central Bank of UAE as a WPS agent, processing payroll through the Wages Protection System – has together with Union Pay and local banks launched region's first EMV prepaid salary card.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition - Active programme of innovation from the major card schemes / payments providers - 5

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
2 ASIA – UnionPay expands its QuickPass contactless mobile payment service	UnionPay has reported the rapid overseas expansion of its QuickPass contactless mobile payments service citing over 180,000 enabled terminals in key Chinese tourist destinations. For example In Australia 30% of brick and mortar stores accepting UnionPay cards now accept QuickPass. The company also report that overseas transaction volume of UnionPay QuickPass grew 8 times last year			Article
CHINA – UnionPay and VISA sign MOU	China UnionPay and Visa have signed a Memorandum of Understanding agreeing to collaborate on payments security, innovation and financial inclusion matters. Visa has made this move in advance of China's impending opening of its card processing network to foreign entities.			Article
2 JAPAN – JACCS and MasterCard launch first mobile wallet service in Japan	MasterCard and JACCS (Japan Consumer Credit Service) Card has launch MasterCard's first mobile payment service in Japan enabling secure payments for Japanese cardholders with NFC-equipped smartphones issued by NTT DOCOMO, KDDI and SoftBank.			Article
SINGAPORE – VISA opens first Asian innovations centre	Drawing on the success of Visa's flagship innovation centre in san Francisco the company has announced the setup of the first in a network of new regional innovation centres. The new 7,000 Singapore facility will serve as a destination for clients, partners and developers, across the region to create the next generation of payment and commerce applications.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition – Active programme of innovation from the major card schemes / payments providers - 6

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
2 THAILAND – UnionPay operated Thai Payments Network goes live	UnionPay International and Thailand's top four commercial banks have launched the Thai Payment Network a transaction switching network based on UnionPay's technical standards. It will process local payments and provide a switching service for processing payments with UnionPay debit cards.			Article
2 AUSTRALIA – MasterCard launch SpendingPulse report	MasterCard Advisors, a unit of MasterCard has launched SpendingPulse™ in Australia, a report that provides a macroeconomic analysis of retail performance and spending. The report uses aggregated and anonymous transaction data, along with all other payment forms including cash, to offer insight into consumer spending trends, providing an early overview of market indices to help retailers, investors, card issuers, banks and government agencies in their decision-making processes.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top themes in this edition — Major technology players extend their footprint, but not without challenges



### Apple, Google & Samsung vie to bring their Pay solutions to market





#### Android Pay (Google)

#### In market:

United States (Sep 15) United Kingdom (May 16) Australia (July 2016)

#### Apple Pay (Apple)

#### In market:

United States (Oct 14)
United Kingdom (Jul 15)

Australia (Nov 15 Amex, Apr 16 ANZ)

Canada (Nov 15 Amex, May 16 CIBC/RBC)

China (March 16 UnionPay)

Singapore (Apr 16 Amex)

France (Jul 2016)

Hong Kong (Jul 2016)

Switzerland (Jul 2016)

#### Planned:

Spain (2016)

#### **Samsung Pay (Samsung)**

#### In market:

South Korea (Aug 15)

United States (Sep 15)

China (Mar 16)

Australia (Jun 16)

Singapore (Jun 16)

Spain (Jun 16)

Brazil (Jul 16)

Puerto Rico (Jul 16)

#### Planned:

Canada (tba)

Hong Kong (2016)

United Kingdom (2016)

Source: ICG research

### Top retail payments innovation themes in this edition – Major technology players extend their footprint, but not without challenges – 1

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
S CANADA – Interac becomes first domestic debit card to connect to Apple Pay	Interac has become the first domestic debit card globally to be included in Apple's Apple Pay wallet. Following a May launch with Canadian banks CIBC and RBC the service has now been rolled out to other leading banks enabling Interac debit card customers to use Apple Pay to buy goods and services in the hundreds of thousands of Canadian stores that already accept contactless payments.			Article
3 UNITED STATES – ExxonMobil launches Speedpass+ mobile payment app with Apple Pay	ExxonMobil has become the first major fuel retailer to accept mobile payment at the pump, including Apple Pay, throughout the majority of its U.S. network. The Speedpass+ mobile payment app can be used at more than 6,000 Exxon- and Mobil-branded petrol stations in the U.S. Customers have the option to select Apple Pay as a default form of payment from within the app.			Article
3 UNITED STATES - FIS and PayPal make the case for cardless cash at the ATM	Building on a February announcement, FIS and PayPal are extending their collaboration using FIS Paydiant technology and a new partnership with Payment Alliance International (PAI). Paydiant and FIS Cardless Cash™ ATM technology will be made available at more than 72,000 ATM locations across the U.S., allowing consumers to get cash from ATMs using their mobile devices.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition – Major technology players extend their footprint, but not without challenges -2

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES – Google ditches Wallet debit card	Google has closed its Google Wallet Card launched in 2013 and as of June 30 <sup>th</sup> 2016 its physical card will no longer be accepted as a funding mechanism. The Wallet Card was designed as a "universal" card that would replace all the other plastic in your wallet.			Article
Samsung Pay adds loyalty cards in the US	Samsung Pay has added functionality enabling U.S. users to upload and store merchant membership and loyalty cards in the Samsung Pay wallet. To use membership or loyalty cards, users simply launch the Samsung Pay app, select the appropriate card, hold their Samsung Galaxy smartphone screen up to the merchant's scanner, and let the card's barcode be scanned at the register.			Article
Sunsung Pay Partners with Global POS Providers to Accelerate Mobile Payments Adoption	Samsung has announced partnerships with the world's largest POS makers, including Verifone Ingenico Group and First Data. Samsung Pay uses both Near Field Communication (NFC) and Magnetic Secure Transmission (MST) Samsung's innovative technology that delivers secure transactions for new EMV chip and NFC terminals, as well as traditional, magnetic strip terminals. The agreement plans to support systematic testing and validating of different POS systems to ensure compatibility and universal acceptance for Samsung Pay.			Article
Southwest Airlines introduces Pay with Amazon	Southwest Airlines has launches Pay with Amazon on board its WiFi-equipped aircraft to enable customers to pay for products through the carrier's on-board entertainment portal using their Amazon account as an alternative to supplying credit card details.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



#### Top retail payments innovation themes in this edition – Major technology players extend their footprint, but not without challenges – 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
Square targets e-commerce with new API	Square has launched a new e-commerce API that enables merchants to process online payments on their own self-hosted, fully developed websites. The API is part of a new set of tools called Build with Square enabling retailers to seamlessly integrate their sites with the payments processor.			Article
3 UNITED STATES – Square integrates with Facebook Ads to drive customer sales	Square has introduced Facebook Ad integration, enabling clients to use its platform to buy and target advertising on the social network. Part of Square's customer engagement suite of tools, the new feature means that Facebook Ads results and Square sales data are integrated, meaning that the marketing spend can be linked to actual sales. The feature was built with LocBox, a marketing start-up bought by Square and will be rolled out to other social channels.			Article
BRASIL – Samsung Pay launches in Brazil	Samsung Pay has taken its first foray into South America – the first of the 'Pays' to do so, in July launching its service with major issuers including Banco do Brasil, Brasil Pré-Pagos, Caixa, Porto Seguro, and Santander. Most MasterCard and visa cards issued by these banks are supported. According to research by FEBRABAN (the Federation of Brazilian Banks), mobile banking usage is on the rise growing by 138 percent in 2015 with more than 11 billion bank transactions through smartphones.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top retail payments innovation themes in this edition - Major technology players extend their footprint, but not without challenges -4

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
3 EUROPE – Alipay expands into Europe	Alipay is pushing forward with plans to expand in Europe, partnering with Ingenico to enable European retailers to accept China's biggest mobile wallet in popular destinations. The company is seeking partners from duty-free shops to luxury and department stores as it targets the 120 million Chinese people who travelled last year. The company plan to drive business to retailers, with a wallet app that lets some 450 million users pay, but also suggests stores, restaurants and pushes coupons.			Article
S FRANCE & SWITZERLAND – Apple Pay extends to first mainland European countries	Apple Pay has rolled out to mainland Europe with July launches in France and Switzerland.  Cardholders with selected MasterCard and Visa cards issued by Banque Populaire, Caisse d'Épargne and Carrefour Banque are amongst the first to be able to use the wallet.  A more limited launch in Switzerland sees card issuers Bonus Card, Cornercard and Swiss Bankers Prepaid enable their MasterCard and Visa cards.			Article Article
SPAIN – Samsung Pay launches in Spain	June saw the launch of Samsung Pay in Spain, the company's first mainland European market. The service is available to customers of CaixaBank and the bank's mobile only subsidiary imaginBank with Abanca and Banco Sabadell to follow.	•	•	Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### Top retail payments innovation themes in this edition - Major technology players extend their footprint, but not without challenges $-\,5$

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SPAIN – PayPal payments come to Vodafone mobile wallets	PayPal and Vodafone have announced, where millions of PayPal's European customers will be able to fund payments on Android smartphones at Visa contactless terminals using the Vodafone Wallet. The service will start in Spain and expand to additional European markets later this year.			Article
UNITED KINGDOM     Android pay launches in U.K.	May saw the launch of Android Pay in the United Kingdom, the first market outside the United States. Available to most major bank cardholders, with the notable exception of Barclays, the wallet can be used at contactless terminals including across the London transport system.			Article
UNITED KINGDOM     Barclays Bank caves in to Apple Pay, but goes alone with Android alternative	Barclays Bank has bowed to the inevitable and joined the rest of the UK's biggest banks in introducing Apple Pay support. The big UK bank has been a reluctant stand out against Apple Pay. While supporting apple Pay the bank says it currently doe not plan to support the recent launch of rival service Android Pay, preferring instead to go it alone with its own Barclaycard app which includes support for HCE-based NFC mobile payments.			Article
UNITED KINGDOM     PayPal Here SDK     signs first U.K.     businesses	PayPal has announced the first partners to adopt its PayPal Here SDK in the United Kingdom enabling these businesses to trade in-store and on-the-go using smartphones and tablets as their point-of-sale (POS). Partners include Autocab the world's largest supplier of cloud-based taxi booking and dispatch system.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



### Top retail payments innovation themes in this edition – Major technology players extend their footprint, but not without challenges – 6

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
© CHINA - Alipay owner Ant Financial raises USD4.5BN	At the end of April, Ant Financial Services Group, the financial-services affiliate of e-commerce giant Alibaba Group Holding Ltd., closed the world's largest private fundraising round for an Internet company USD4.5billion, giving it an approximately USD 60BN valuation. Ant Financial, which operates Alipay, China's biggest online-payments platform by transaction volume, raised its latest funding round from a clutch of investors, including a Chinese sovereign-wealth fund and the country's biggest insurers.			Article
S CHINA - Alipay Launches In- App Biometric Art Game	Alipay in collaboration with advertising agency DDB China has launched an art project game within its mobile app. Users upload their selfie pictures, and within a few seconds their faces are matched to similar portraits from a selection of about 2,000 famous paintings. The company sees it as a fun way to engage customers with its authentication technology. First announced under the moniker 'Smile to Pay' early last year, the system leverages a user's smartphone camera to perform authentication based on facial recognition.			Article
© CHINA - Geoswift, Western Union include Tenpay as a tuition payment partner	Cross-border payments provider Geoswift and Western Union Business Solutions have announced the inclusion of online payment platform Tenpay, as one of the payment channels in their proprietary online tuition payment portal providing overseas Chinese students and families payments access to approximately 400 universities and higher education institutions across 9 countries in Asia, Europe and North America.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# Top retail payments innovation themes in this edition - Major technology players extend their footprint, but not without challenges - 7

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
© CHINA – Huawei Launches Chinese NFC payment service	Chinese handset maker Huawei Technologies Co. has teamed up with China UnionPay to offer a service called Huawei Pay. Huawei's latest move will likely intensify the already stiff competition in China's mobile-payment market, where Apple Pay is going up against powerful local competitors.			Article
© CHINA – Samsung Pay goes live in China with UnionPay	At the end of March, in-conjunction with UnionPay, Samsung Pay was launched in China. An initial nine financial institutions including China Construction Bank and Industrial and Commercial Bank of China will be joined by a further six banks including Bank of China.			Article
Samsung Pay strikes deal with Alipay	Just a couple of month's after its Chinese launch Samsung Pay has struck a deal with Alipay enabling Samsung Pay to make payments using their Alipay accounts.	•		Article
© CHINA – Uber signs deal with Alipay to support Chinese travellers	Ride-hailing company Uber has struck a deal that will enable Chinese customers pay for rides using popular their Alipay app when they travel to more than 68 countries and 400 cities. As part of the partnership, Uber's service will now also be available through Alipay's mobile app. Uber's move is designed to give it a leg up in the potentially huge Chinese ride-hailing market, where the company is a distant second place behind local leader Didi Chuxing.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top retail payments innovation themes in this edition — Major technology players extend their footprint, but not without challenges — 8

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SINGAPORE – Apple Pay launches in Singapore	Apple Pay launched in Singapore in April initially only supporting American Express issued cards. By the end of May this was extended to support Visa and MasterCard credit and debit cards issued by Singapore's five major banks accounting for over 80% of the country's credit and debit cards on issue.			Article
SINGAPORE – Samsung Pay quick to follow with Singapore launch	By June Samsung also launched its wallet in Singapore, initially with MasterCard and Visa with American Express compatibility to follow. Launch banks included Citibank, DBS/POSB, OCBC Bank and Standard Chartered. In a sidebar to the announcement the company said that "Samsung and Singtel will be exploring potential collaborations in the mobile payment space".			Article
SOUTH KOREA – Samsung Pay report 100 million unique transactions in seven countries	In August Samsung Pay celebrated its first anniversary of operation with the company announcing the wallet had handled about 100 million unique transactions in seven countries it operates in. In Korea more than 2 trillion won (about USD 1.8BN) in transactions with more than 25 percent of the transactions made online.			Article
S AUSTRALIA – ANZ first Australian bank to launch Apple Pay	ANZ became the first major bank to offer ANZ to a broad customer base following Apple Pay's earlier tie up with American Express. ANZ claim the tie up has sparked a surge in applications for credit cards and deposit accounts, which has forced the other major banks to re-enter negotiations with the technology giant.			Article



<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### Top retail payments innovation themes in this edition – Major technology players extend their footprint, but not without challenges – 9

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
AUSTRALIA –     Samsung Pay     launches with Amex     and Citi	Following Apple Pay's lead Samsung Pay arrived in Australia in June. In more restricted availability Samsung Pay can be used with American Express issued cards and Citibank Visa Cards.		•	Article
AUSTRALIA – Google launches Android Pay in Australia	Android Pay has become the third of the 'Pays' to launch in Australia with a July debut. While ANZ is again the only major to embrace the wallet a tie up with Cuscal has enabled Android Pay to quickly achieve a broader customer base than its rivals. Through Cuscal the wallet extends to close to 30 financial institutions and more than 2 million MasterCard and Visa cardholders.			Article
AUSTRALIA – Four Australian banks seek competition commission permission to negotiate collectively with Apple	In July Commonwealth Bank, National Australia Bank, Westpac and Bendigo Bank have this week applied to the Australian Competition and Consumer Commission (ACCC), asking permission to negotiate as one with Apple. The banks are seeking to join forces and negotiate as a bloc with technology giant Apple, which could lead to a collective boycott of Apple Pay, in a bid to offer "digital wallets" on the iPhone.  By August the ACCC in an interim ruling said "Given the complexity of the issues and the limited time available, the ACCC has decided not to grant interim authorisation at this time." "The decision is not indicative of whether or not a draft or final authorisation will be granted. The ACCC requires more time to consult and consider the views of industry, consumers, and other interested parties."  A draft decision is expected to be released in October 2016.			Article



<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top themes in this edition – 4 A range of other wallet developments via for consumer adoption



### Top retail payments innovation themes in this edition – A range of other wallet developments via for consumer adoption - 1



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
MEXICO – Gemalto teams with Prosa to bring mobile payments to Mexican banks	Gemalto and PROSA, one of the largest payment processors in Latin America, has announced a partnership to bring mobile payments to Mexico. PROSA has operations in eight Latin American countries and will provide mobile payment services to all customers, which include 95% of credit, debit and prepaid card issuers in Mexico. Gemalto's Allynis Trusted Service Hub (TSH) will enable new customer on-boarding allowing banks to launch their own NFC mobile payment wallets utilising host card emulation (HCE).			Article
4 UNITED STATES – BBVA And Univision launch digital money transfer products	Univision Enterprises a leading media company serving Hispanic America, has partnered with Houston based BBVA subsidiary Bancomer Transfer Services, to launch Univision Remesas, an international digital money transfer service for Hispanics. Available on iOS, Android, Web, and Mobile Web, the bilingual digital service was developed with UCI's key demographic in mind: the more than 57 million Hispanics in the U.S.			Article
<ul> <li>UNITED STATES –</li> <li>Ingo Money</li> <li>introduces cheque –</li> <li>splitting features</li> </ul>	Atlanta based Ingo Money has introduced check splitting feature that enables users to cash a check via a smartphone app and send the funds instantly to multiple accounts.  Through the Ingo Money service, underwritten by First Century Bank, users can access their full check funds in minutes, irreversibly, and then quickly fund bank accounts, pay credit card bills, and make purchases.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



### Top retail payments innovation themes in this edition – A range of other wallet developments via for consumer adoption - 2



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
4 UNITED STATES – Bank of America and US Bank switch on real-time mobile P2P	As the U.S. continues to develop faster payments solutions, real-time payment provider Early Warning in partnership with Bank of America ad U.S. Bank has started actively processing real-time person-to-person (P2P) transactions through Early Warning's clearXchange™ network. Customers at both banks are now able to send eligible real-time P2P payments to customers at either bank, with funds made available for use. The solution is unique in its ability to provide consumers with immediate access to funds, directly in their bank account. Bank of America and U.S. Bank have a combined reach of nearly 22 million mobile banking customers in the U.S.			Article
4 UNITED STATES – Walmart Introduces Walmart Pay	First launched in late December Walmart has reported that its own Walmart Pay wallet is now is now available in all its more than 4,600 stores nationwide. Available through the Walmart app, Walmart Pay works with any iOS or Android device*, at any checkout lane, and with any credit, debit, pre-paid or Walmart gift card. The company claim that more than 20 million customers actively use the wallet.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### Top retail payments innovation themes in this edition – A range of other wallet developments via for consumer adoption - 3



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
FINLAND – Finnish S-Bank introduces fuelling mobile app	S-Bank, part of the S Group – a Finnish network of co-operative retail and service sector companies with more than 1600 outlets – is launching a ground-breaking fuelling service based on mobile technology and a unique app which combines retail, banking, and fuelling. At the station, S-Mobile automatically recognizes the customer's location. Fuelling can be initiated by simply choosing the correct gas pump from the app. After fuelling, the payment is handled automatically by the S-Bank Visa card, linking the payment with customer loyalty benefits.			Article
NETHERLANDS –     ABN Amro enables     customers to change     debit card settings     via m-banking app	ABN Amro has introduced upgrades to its Dutch mobile banking app which sees 60 million log-ons a month. Providing customers greater control the app can be used to make various setting changes their linked debit card. For example, clients can adjust their ATM and POS limits thereby increasing a limit to make a large purchase and lowering it once they have paid. Geo-locational options are available to help cardholders that are travelling abroad.			Article
NETHERLANDS – Rabobank's MyOrder app drives mobile refuelling	The mobile payments subsidiary of Rabobank, MyOrder, has introduced a new feature which enables car drivers to pay in advance for fuel at 220 Tamoil petrol stations in the Netherlands. MyOrder subscribers will be able to use their smartphone to select their desired gas station, fuel requirement and make a payment. The app also provides users with direct insight into their refuelling behaviour and spending habits.			Article [PDF]

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – A range of other wallet developments via for consumer adoption - 4



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWITZERLAND – Top 5 Swiss banks, SIX and PostFinance create a single Swiss mobile payment solution	Switzerland's five biggest banks and some of the country's main retailers will launch a digital payments system later this year enabling consumers to pay for goods by mobile phone and other digital devices. Supermarket chains Coop, Migros and telecom operator Swisscom are participating in the scheme, which will be open to other retailers as well. PostFinance and SIX have already launched their own mobile payment systems which will be combined with the new "TWINT" system creating a single Swiss system.			Article
4 AUSTRALIA – NAB Launches mobile payment app	In January NAB issued its own mobile wallet NAB Pay. At launch to use NAB Pay, customers need a compatible Android device, have downloaded the latest NAB Mobile Internet Banking App and have a NAB Visa Debit card. In June enhancements saw Visa Credit Cards being added alongside a facility whereby customers can now continue using their personal Visa credit cards through NAB Pay within minutes of a replacement card being issued if their card has been lost or stolen. This new instant card feature means customers who have NAB Pay on their compatible Android device can keep paying with their replacement card, without having to wait days for their physical card to arrive in the mail.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top themes in this edition — • Real Time Settlement / Faster Payment Services continue to gather momentum



#### Top retail payments innovation themes in this edition – **Real Time Settlement / Faster Payment Services continue to gather momentum - 1**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
5 UNITED STATES  - Jack Henry joins The Clearing house for real-time payments push	Leading technology solutions and payment processing services provider Jack Henry & Associates through its JHA Payment Solutions™ group has partnered with The Clearing House (TCH) to expand the scope of U.S. financial institutions equipped to send and receive new real-time transactions. TCH is currently working to build a new real-time payment system, which TCH will own and operate. In partnering with JHA Payment Solutions, TCH will greatly expand the new system's reach and advance the goal of real-time payment ubiquity.			Article
5 UNITED STATES  - The Clearing House partners FIS to test real-time payments	As part of its move to offer real time settlement, The Clearing House (TCH) and FIS have announced that they are preparing to launch a pilot with early-adopter financial institutions, initially focusing on the bill payment use case, using FIS technology and operating via the TCH real-time payments platform. Already under development, the pilot will go live in the first quarter of 2017, and bring payments that clear and settle in real-time to the pilot financial institutions.			Article
5 EUROPE – EPC Launches pan-European instant payments consultation	The European Payments Council (EPC) has launched a public consultation on the Single Euro Payments Area (SEPA) Instant Credit Transfer (SCT Inst) scheme. The proposed scheme is the first in the world to be interoperable in a region as large as SEPA (34 countries). All payment stakeholders including PSPs, as well as end users and technical players are encouraged to participate in the public consultation.			Article [PDF]

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – Real Time Settlement / Faster Payment Services continue to gather momentum - 2

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWITZERLAND – New Swiss Interbank Clearing payment system goes live	Switzerland has launched a new interbank payment system (SIC), using the ISO 20022 messaging standard to provide a range of new services to bank and corporate users. After 30 years of operation, the SIC system has been completely redeveloped by market operator SIX on behalf of the Swiss National Bank (SNB) and the Swiss financial centre. The new infrastructure is based on the ISO 20022 message standard, lowering the number of technical interfaces between participants and stripping out the complexity built in to the legacy platform.			Article
• UNITED KINGDOM  - Access to U.K. faster Payments expands	Raphaels Bank has become the first new fully operational participating financial provider of Faster Payments, the UK's 24/7 real-time payment service. The bank is the 12th direct participant of the Faster Payments Scheme, and the first new bank to connect directly to the payment system since it was launched in 2008. Raphaels is using its participation to act as a sponsor - enabling other payment service providers (PSPs) to access true, 24/7 real-time payments via its connection.			Article
• UNITED KINGDOM  - Payments UK launches SEPA directory and open API	Payments UK has launched an accessible directory simplifying cross-border SEPA payments into the United Kingdom. From February Eurozone banks and Payment Service Providers (PSPs) have been able to process SEPA payments using only a customer's IBAN (International Bank Account Number), meaning that they no longer need the Business Identifier Code (BIC) of the PSP they are intending to pay. Although the rule does not apply to the UK until October, Payments UK has worked with Swift to build a SEPA IBAN-only directory that provides PSPs with a way of deriving the BIC from the IBAN.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – Real Time Settlement / Faster Payment Services continue to gather momentum - 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
• UNITED KINGDOM - Payments UK launches Standards Collaboration Framework	Payments UK, has launched a new one-stop shop designed to help the industry better access and implement the standards it relies on. The new service, called the Standards Collaboration Framework, will provide the capability for the industry to future-proof standards requirements with a single, authoritative resource. It will provide rigorous version control and make it possible for relevant industry stakeholders to obtain all the up-to-date standards documentation crucial to supporting the UK payments infrastructure.			Article
• UNITED KINGDOM  - PayPort by Vocalink awarded vendor accreditation from faster payments	PayPort by VocaLink has become one of the first platforms to gain Vendor Accreditation from Faster Payments Scheme Limited (FPSL), helping to facilitate a level playing field between larger established financial institutions and up and coming challenger banks. PayPort is an end-to-end service that offers banks and other financial institutions fast, efficient and secure access to Faster Payments without the cost of introducing a new technology infrastructure.			Article
MALAYSIA – Bank Negara unit MyClear to set up new retail payment platform	MyClear, a wholly-owned subsidiary of Bank Negara Malaysia (BNM), has announced the development of a new real-time retail payments platform which is expected to launch in 2017. The enhanced Real-Time Gross Settlement System (RENTAS) will cater for multiple messaging formats including the internationally-recognised ISO 20022.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### Top retail payments innovation themes in this edition – Real Time Settlement / Faster Payment Services continue to gather momentum - 4

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SINGAPORE - Singapore considers Paym-style payments platform	Singapore is looking into the creation of a payments system similar to the UK's Paym that would let someone send money using only the recipient's mobile number, email address or social network account. The all-in-one addressing system - which would mean senders would not need a recipient's bank account details - is being explored by banks and the Monetary Authority of Singapore.			Article
<b>⑤</b> THAILAND − THB100M (~USD3M) budget set by ITMX for national payment scheme	Thailand's NATIONAL ITMX will allocate a budget of around Bt100 million to provide an interface for banks so they can access and manage information as part of preparation for a national e-payment system to be developed under a 5 year deal with VocaLink. The Bank of Thailand will be the coordinator of the system with the National Broadcasting and Telecommunications Commission and the Interior Ministry, as they will synchronise mobile-phone numbers and personal identity cards.			Article
SIA wins Reserve Bank of New Zealand RTGS contract	Italy's SIA has won a contract with the Reserve Bank of New Zealand to implement and support a new real-time gross settlement system that will replace the current Exchange Settlement Account System (ESAS). The Reserve Bank went to public tender for the new system in January 2015 after completing a strategic review of its payments and securities settlement platforms. SIA will use its wholly-owned South African subsidiary Perago to deliver and support the new system.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# Top themes in this edition – 6 Continued activity in the international remittances market



#### **Top retail payments innovation themes in this edition –** Continued activity in the international remittances market - 1

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
WORLDWIDE – Western Union partners with mobile messaging app Viber	Western Union and Viber, a leading mobile messaging app with more than 600 million users worldwide has announced an agreement to offer a fast and simple way to send money to friends and family virtually anywhere in the world from the convenience of the Viber app. Leveraging Western Union's WU® ConnectSM platform will initially enable Viber users in the United States will be able to send up to US\$499 for pickup at more than 500,000 Western Union Agent locations in 200+countries and territories.			Article
6 CANADA – TransferWise launches in Canada	TransferWise a leading consumer financial technology start-up, has launched its peer to peer international money transfer platform in Canada. The company has been recognised for its innovative approach by the World Economic Forum as a Tech Pioneer, included as a CNBC 50 disruptor, in the Forbes FinTech 50 list and its mobile app was recognised as Apple's Most Innovative App, 2015. 3 million Canadians live abroad and almost 7 million people live in Canada from overseas. They will now be able to send Canadian dollars to any of the 60 countries and 35 currencies on TransferWise's international money transfer platform.			Article
<b>6</b> UNITED STATES  – MoneyGram And Hyperwallet announce partnership	Hyperwallet a leading global payouts provider to millions of independent workers has strengthened its partnership with MoneyGram. Using Hyperwallet's API integration, users will be able to pick up their earnings at thousands of worldwide MoneyGram locations within just minutes of submitting their request.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



#### **Top retail payments innovation themes in this edition –** Continued activity in the international remittances market - 2

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<b>GERMANY</b> – Deutsche Bank and Hansa Orga introduce plug and play integration	Hanse has introduced its "HO Global Format Integrator" a "plug & play" solution for companies wishing to configure and establish international transaction messages faster and more easily in their SAP system. The "HO Global Format Integrator", which was co-developed by Deutsche Bank, will provide corporate customers with pre-tested templates for ISO 20022 XML and hence reduce the technical effort for integrating transaction services into the SAP system.			Article
UNITED KINGDOM     Barclays backs U.K. launch of social payments app Circle	Social payments company Circle has launched in the UK with the support of Barclays Bank and an e-money issuer license from the Financial Conduct Authority. UK consumers can send and receive cross border payments with instant conversion between pound sterling and US dollars with zero fees. For payments transferred to countries where Circle hasn't yet launched, the company uses the bitcoin blockchain to transfer currencies in and out of the national denomination.			Article
© UNITED KINGDOM & AUSTRALIA - Barclays and Commonwealth Bank link mobile apps	Barclays is teaming up with the Commonwealth Bank to enable customers to send instant mobile payments around the world with just a phone number. Barclays has connected its Pingit m-payments app to CBA's equivalent, CommBank, for the service, letting their respective customers transfer funds without needing to enter banking details. By teaming up with each other, Barclays and CBA hope that they can grab a bigger slice of the fast growing international money transfer sector, which has seen a host of new entrants, such as TransferWise and Azimo, undercutting banks.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – Continued activity in the international remittances market - 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
6 TANZANIA – Xendpay Expands African mobile money market	Working with mobile network operators M-Pesa-Vodafone in Tanzania and Air Tel Money in Burkina Faso, online money-transfer specialist Xendpay has expanded its services in Africa. Additionally Xendpay will add Nigeria's currency to its new currencies portfolio. The company currently serves more than 170 different countries and more than 45 different currencies.			Article
6 BANGLADESH – MasterCard, Western Union & bKash launch mobile remittance service	MasterCard, Western Union, mobile financial service provider bKash and BRAC Bank has launched an international remittance receiving service in Bangladesh. bKash's registered customers can use their mobile phones to receive remittances from abroad directly into their bKash accounts. Bangladesh is the eighth largest receiver of international remittances in the world.			Article
© INDIA - Two Major Indian banks join SWIFT global payments initiative	ICICI Bank and AXIS Bank are the first Indian banks to sign up for SWIFT's global payments innovation initiative, joining forces with more than 70 other leading banks globally. The initiative aims to enhance cross-border payments by leveraging SWIFT's proven messaging platform and global reach. In its first phase, the initiative will focus on business-to-business payments. Designed to help corporates grow their international business, improve supplier relationships, and achieve greater treasury efficiencies; the new service will enable corporates to receive an enhanced payments service directly from their banks.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# Top themes in this edition — A range of new POS / mobile POS devices brought to market



## Top retail payments innovation themes in this edition – A range of new POS / mobile POS devices brought to market - 1



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul><li>❷ BRASIL - Ingenico &amp; TW2 launch POS service in Rio</li></ul>	Ingenico Group and TW2 has launched POS CONTROLE, a POS based customer service application at one of Brazil's largest soccer arenas. The installation in Rio de Janeiro combines POS CONTROLE along with Ingenico's iWL280 wireless terminal, using Bluetooth, WI-Fi or 3G communication and will allow visitors to have their food and beverage orders taken on the move, at any time during the game. The solution will deliver a full checkout system for all payment methods, including electronic and cash at 60 concessions within the stadium.			Article
<b>○</b> FRANCE – Ingenico Acquires payments screen start-up Think & Go	Ingenico Group has acquired Think&Go NFC, a start-up provider of connected screens. Founded in 2010, employing a staff of fifteen, Think&Go NFC has developed a technology that enables any kind of digital display to interact with connected objects such as smartphones and transit passes. As a result, the connected screens become a vehicle for marketing tools like drive-to-store, couponing, loyalty programs and downloads. With fifteen innovation awards, two patents and 150 screens deployed, the company has already contributed to the global standing of French FinTech.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

## Top retail payments innovation themes in this edition – A range of new POS / mobile POS devices brought to market – 2



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWEDEN - Restaurant POS firm TouchBistro integrates to iZettle	TouchBistro, a leading iPad point-of-sale(POS) solution for restaurants in 35 countries has integrated with iZettle. Servers use the TouchBistro app to take customer orders tableside, or while patrons are in line, and instantly transmits them to the kitchen or bar for preparation. Bills are automatically calculated and split according to the patrons' requests. With iZettle integration, bills totalled by TouchBistro are automatically processed using the iZettle iPad chip and pin or contactless card readers.			Article
<ul><li>UNITED KINGDOM</li><li>Contactless charity donation tin launched</li></ul>	Elavon, a wholly owned subsidiary of US Bancorp has worked closely with Cancer Research UK to build the foundations for a contactless donations service which will allow consumers to use their cards when donating to the charity, the first mobile contactless only donations service roll-out of its kind in the world. In 2014, 55% of all donations direct to charities in the U.K. were made with cash, so it's important that as card payments represent an increasing share of consumer spend, charities look for new solutions to help them replace valuable cash income. The solution incorporates a secure card-reader which replaces the usual slot found at the top of a charity tin.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

## Top retail payments innovation themes in this edition - A range of new POS / mobile POS devices brought to market - 3



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
JAPAN –     NEC trials facial recognition technology at POS	NEC Corporation has started a series of trials for cashless payment services using its facial recognition technologies at small shops inside its head office building in Tokyo. The payment service uses NeoFace facial recognition technologies, featuring NEC's facial recognition algorithm, which have been recognized as providing the world's highest authentication accuracy.			Article
SINGAPORE – Mint Strikes mPOS deal with NETS	Australian payments processing technology provider Mint Payments Limited has signed a strategic partnership agreement NETS to boost Mint's expansion in Asia. The 5 year deal includes development and launch of Singapore's first NETS branded unified mPOS solution, licensed by Mint, that will enable merchants to accept all major credit cards and NETS debit cards as well as establishing a new acquiring partnership for Mint and its channel partners in Singapore, such as ABSS (MYOB Asia), using Mint's omni-channel payments solution.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Top themes in this edition – 8 Fintech and blockchain developments



## Top retail payments innovation themes in this edition – Fintech and blockchain developments

#### **Commentary from the ICG Payments Practice**

The Fintech development space is still quite concentrated in peer-to-peer lending, payments, and financial services globally, while main transaction banking and mortgage lending is still dominated by the traditional banking sector.

Notable is the size of several of the Chinese-based companies including Ant Financial (runs Alibaba's payment affiliate Alipay), Lufax (P2P lender), and JD Finance (online retailer, Alibaba competitor). Select US companies, Stripe (payments) and SoFi (P2P Lending) are established and One92 (payments) in India is quickly gaining momentum.

Blockchain continues to gain momentum amongst large global financial institutions through technology partners such as Ripple as well as investing heavily in their own technology. The network effect of connecting financial services through a standard blockchain technology is starting to take hold, yet the volatility of the actual digital currency is still a big challenge for many.

Canadian, Australian, and European banks are all participating in blockchain tests with some utilising the capability with a small number of live transactions. The large payments organisations such as Visa launched a POC in Europe and smaller players such as Circle have pushed the blockchain capability into the mainstream with an ability to transact through Apple's iMessage.



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A seasoned financial services executive and Fintech advisor, mentor and investor with international leadership, product, payments, finance, marketing, strategy and transformation experience. Brings over 20+ years of P&L management from organisations including GE, FMCG, ANZ Bank, Westpac Bank.

SME Focus Area: Fintech & Partnerships and Blockchain Technologies

## $Top\ retail\ payments\ innovation\ themes\ in\ this\ edition-\\ Fintech\ and\ blockchain\ developments\ -\ 1$



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
8 CANADA – RBC Tests distributed ledger for remittances and loyalty programme	Royal Bank of Canada (RBC) has started working on a new proof of concept (PoC) for distributed ledger-based remittances using technology offered by industry start-up Ripple.  RBC and Ripple are now working on a limited production Pock with the goal of evaluating how the distributed ledger trial could impact other areas of the bank's business if more widely implemented. Notably, the release comes amid a broader push by Ripple to promote awareness about its partnerships with financial incumbents.			Article
UNITED STATES     CGI adds Ripple gateway to payments portfolio	CGI has successfully integrated Ripple's distributed financial technology into the CGI portfolio of payments solutions to assist in the digital transformation of its clients. CGI's Intelligent Gateway is one of the first payments solutions in the industry to integrate Ripple's distributed financial technology and provides a solution-agnostic, transformational wrapper around a client's payment processing systems.			Article
8 EUROPE – European Parliament hosts blockchain conference	The European Parliament has hosted a four day conference on virtual currencies and blockchain as it seeks to educate MEPs about the fast-growing world of distributed ledgers. The non-commercial exhibition brought together representatives from the World Bank, IMF, OECD, Bank for International Settlements, United Nations and Europol, along with academics, central banks, established companies and start-ups.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## $Top\ retail\ payments\ innovation\ themes\ in\ this\ edition-\\ Fintech\ and\ blockchain\ developments\ -\ 2$



Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED KINGDOM     U.K. Government     maps out Fintech     strategy	The UK Government is stepping up its support for the country's burgeoning fintech sector with the creation of a new strategy unit, start-up information hub and bridge to global markets. In a keynote speech at the 2016 Innovate Finance Global Summit the Economic Secretary to the Treasury, Harriett Baldwin, said the new measures have been developed in response to recommendation made in an EY report released earlier this year which ranked the UK as the number one place to flourish as a fintech company, above other tech hotspots such as California, New York and Singapore.			Article
3 UNITED KINGDOM & JAPAN – Rakuten opens blockchain development lab in Northern Ireland	Japanese e-commerce giant Rakuten has opened a blockchain development lab in Belfast, Northern Ireland to cater for its expanding portfolio of investments in the fintech arena. The new Lab will be positioned as a dedicated research and development organisation within Rakuten, focused on blockchain technology and its potential applications in the fintech and e-commerce sectors. The establishment of the facility follows the acquisition by Rakuten of IP assets from Bitnet Technologies, operators of a digital payments platform powered by blockchain.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

## Top themes in this edition – **9** Growing interest in wearable payments



## Top retail payments innovation themes in this edition – Growing interest in wearable payments - 1

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES – Fitbit buys Coin assets for wearable payments play	Health and fitness wearable company Fitbit, Inc. has acquired the wearable payment assets of Coin, a Silicon Valley consumer electronics and financial technology company. The deal includes key personnel and intellectual property specific to Coin's wearables payment platform. While there are no plans to integrate Coin's wearable payments technology into the 2016 Fitbit product roadmap, the acquisition accelerates Fitbit's ability to develop an active NFC payment solution that could be embedded into future Fitbit devices. The acquisition excludes smart payment products, such as Coin 2.0.			Article
• UNITED STATES - Coin launches developer programme for wearable payments	Coin has established a developer program for accelerating the integration of payments into wearables. The program will enable access to the MasterCard Digital Enablement Service (MDES) to securely digitize MasterCard payment credentials and further reduce the barrier to entry for device manufacturers. The program, compatible with a range of wearables such as fitness bands, smart watches and jewellery.			Article
<ul> <li>UNITED STATES         <ul> <li>MasterCard and</li> <li>Parsons School of</li> <li>Design run Fashion</li> <li>Design Hack</li> </ul> </li> </ul>	MasterCard is teaming up with New York based The New School's Parsons School of Design to bring a forward-thinking, design-led approach to payments technology. In a Fashion and Design Hack sponsored by the two organisations, teams of students will compete to develop solutions and build prototypes for connected commerce by embedding payments functionality into products, new designs or concepts.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – Growing interest in wearable payments - 2

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES –     MasterCard present     Virtual Reality and     Payment Wearables     Tee Off at the Arnold     Palmer Invitational     Golf Tournament	MasterCard has showcased its vision of the future of commerce to life with virtual and augmented reality commerce experiences and payment enabled wearables at the Arnold Palmer Invitational Presented by MasterCard (API) in Orlando, FL. MasterCard has collaborated with Wearality, an Orlando-based start-up that designs virtual reality glasses and wearables, to allow consumers to identify an item within the experience – such as a golf shirt – and buy it without leaving the virtual world.			Article
BRASIL - Visa brings contactless rings to Rio Olympic Games	Visa, the exclusive payment provider at the Olympic and Paralympic Games, showcased the first payment wearable ring backed by a Visa account at the Rio Olympic Games.  The Visa payment ring was given to all Team Visa athletes in Rio, a group of 45 Olympic hopefuls from around the world.  The ring uses the patented NFC Ring® design of McLear & Co. that includes a secure microchip made by Gemalto, with an embedded NFC-enabled antenna, enabling contactless payment capabilities.			Article
SWEDEN – Visa test contactless band at Eurovision song contest	Gemalto and Visa have provided visitors at the 2016 Eurovision Song Contest with contactless payment wristbands. Gemalto's solution for Visa encompassed personalisation, packaging and fulfilment of the contactless wristbands, and utilised its Allynis Smart Event Platform for the prepaid payment program and event management. Part of Visa Europe's official ESC sponsorship the bands were made available for purchase at the Eurovision Village in Stockholm.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



## Top retail payments innovation themes in this edition – Growing interest in wearable payments - 3

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWITZERLAND – Bulgari, MasterCard and WISeKey deliver first-ever Intelligent Mechanical Luxury Watch	Luxury brand Bulgari, MasterCard and WISeKey announced that MasterCard have launched the first-ever "intelligent mechanical luxury watch" with embedded contactless payment capability – the Bulgari Diagono Magn@sium.  Additional secure access functions planned by Bulgari include the ability to open select automobile doors, Bulgari hotel doors and other participating partners' products.			Article
SWITZERLAND – Mondaine adds contactless payments to new smart watch	Swiss luxury watchmaker Mondaine is to add NFC payment capability to a variety of its watches, starting with its Mondaine Helvetica No1 smartwatch, that will let wearers make payments with a tap of their wrist at any contactless enabled terminal. The company has partnered with Oberthur Technologies and Cembra Money Bank to roll out the capability in Switzerland.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### **Regulatory Update**

A summary of key regulatory developments impacting the payments sector.





Development	What and why important	Reference information
® UNITED STATES  - Calls for repeal of Durbin Amendment	Part of the Dodd Frank Wall Street Reform and Consumer Protection Act that limits transaction fees imposed upon merchants by debit card issuers. The Durbin Amendment, named after U.S. Senator Richard J. Durbin and introduced in 2010, proposed to restrict these interchange fees, which averaged 44 cents per transaction based on 1 to 3% of the transaction amount, to 12 cents per transaction for banks with \$10 billion or more in assets.  In July 2016 the State Bankers Associations wrote to Republican Senator Randy Neugebauer to express their support for a bill he has introduced that would repeal Dodd-Frank's Durbin Amendment and eliminate the government-imposed price caps on debit card interchange. The groups pointed out that the amendment has reduced banks' ability to offer affordable products and services to their customers, while failing to pass on any tangible savings to consumers, as originally intended. The Association claim "The amendment has only rewarded big-box stores with higher profits, while resulting in higher costs to smaller merchants, fewer resources available for banks — including community banks — to serve their communities, and a reduction in low-cost banking services for those most in need."	Regulator Homepage  Article



Development	What and why important	Reference information
® EUROPE – Payment Services Directive 2 (PSD2)	Published at the end of 2015 and to be implemented by 2018, the European Payment Services Directive 2 (PSD2) will bring about key changes to the Everyday Payments environment, including:  -Extension of scope beyond Europe and in the definition of a "Payment Institution."  - Third-party payment initiation. PSD2 will encourage competition in European payments by regulating payment initiation service providers (PISPs).  - Third-party account access. PSD2 will regulate account information service providers (AISPs). These providers act as aggregators of customer payment account information.  - Prohibition of card surcharges. PSD2 seeks to standardise the different approaches to surcharges on card-based transactions which are currently applied across EU.  -Security of online payments and account access.  More than two thirds of bankers fear that PSD2 will cause them to lose control of the client interface and many of them remain unsure how to respond to the new directive, causing them to adopt a defensive, wait-and-see stance, according to research from PwC. The firm quizzed senior execs at 30 major banks in eight European countries, finding that 88% think that PSD2 will affect their business, with 68% saying that they will be weakened as a result of the directive.	Regulator Homepage  Article



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Development	What and why important	Reference information
® AUSTRALIA - Reserve Bank Review of Card Payments	In May the Reserve Bank concluded its Review of Card Payments Regulation introducing three new standards:  - a new surcharging standard ensuring that consumers using payment cards from designated systems cannot be surcharged in excess of a merchant's cost of acceptance for that card system. Eligible costs are clearly defined in the standard and new transparency requirements will promote compliance with and enforcement under the new framework. Enforcement powers under the new framework, took effect for large merchants on 1 September 2016 and for other merchants will be implemented on 1 September 2017.  - new interchange standards will result in a reduction in payment costs to merchants. The weighted-average benchmark for credit has been maintained at 0.50 per cent, while the benchmark for debit cards has been reduced from 12 cents to 8 cents. The weighted-average benchmarks will be supplemented by ceilings on individual interchange rates which will reduce payment costs for smaller merchants. The new interchange standards will largely take effect from 1 July 2017.  -to address issues of competitive neutrality, interchange-like payments to issuers in the American Express companion card system will now become subject to equivalent regulation to that applying to the MasterCard and Visa credit card systems.	Regulator Homepage  Article



Development	What and why important	Reference information
® UNITED KINGDOM MasterCard Pledges 'Vigorous' Defence Against GBP14BN Class Action	MasterCard is facing a multi-billion pound lawsuit for imposing card charges that were ultimately borne by UK consumers in what is set to be one of Britain's first US-style class action cases. The landmark lawsuit will be one of the first brought under the Consumer Rights Act 2015, which enables consumers to bring collective damages claims on behalf of individuals who have suffered losses in competition cases. The claim is based on a long running legal battle between MasterCard and the European Commission over MasterCard debit and credit card interchange fees. In 2014, MasterCard was found to have infringed EU law by imposing interchange fees on cross-border card transactions.	Article
® KENYA – Governments backs review of Sub- Saharan remittance costs	Kenya's government has backed proposals to review regulatory and market factors that make sending money to Sub-Saharan Africa the most costly remittance channel in the world. The country's Ministry of Foreign Affairs has agreed to work towards lowering the cost of sending funds between Europe and Africa to 3 percent of the transaction value by 2020. World Bank figures published in June show average costs of 9.6 percent for transfers to Sub-Saharan Africa, higher than any other area and 2 percent more than the global average of 7.6 percent. The initiative is being spearheaded by ADEPT, an international organisation for supporting diaspora development, which is currently considering which ten countries will be part of the initial scheme.	Article
HONG KONG -     Monetary Authority issues first licences to stored-value service providers	The Hong Kong Monetary Authority (HKMA) has granted the first batch of licences to five stored-value service providers in a landmark move to regulate the city's rapidly expanding electronic payment business. The five licence holders picked out of 20 applicants are: Alipay Wallet; Tap & Go, run by PCCW's HKT; WeChat Pay; Hong Kong-based TNG Wallet; and Octopus & O! ePay run by Octopus Cards. According to the HKMA "The grant of the first batch of licences for issuers of stored-value facilities is turning a new page in retail payment development in Hong Kong,"	Article

#### Key developments by Region

In this section we report top payments innovation and other notable developments presented by geographic region.

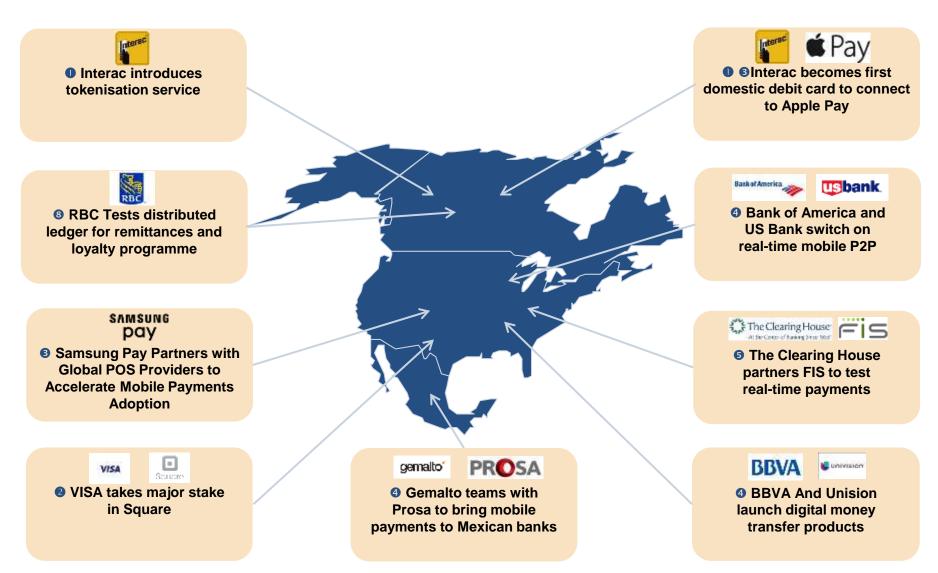
Most news stories are rated for innovation and impact with some additional, but less significant, developments also listed.



### **Key developments in North America**



#### **Key developments in North America**



#### **Key developments in North America – 1 (Canada)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
CANADA – Interac introduces tokenisation service	Interac has launches its Token Service Provider (TSP) service a first for a domestic debit network globally. The proprietary token generation and management service enables financial institutions, merchants and partners to build and manage secure digital payment experiences. The TSP was developed in collaboration with IBM, Bell ID and Everlink.		•	Article
CANADA – Interac becomes first domestic debit card to connect to Apple Pay	Interac has become the first domestic debit card globally to be included in Apple's Apple Pay wallet. Following a May launch with Canadian banks CIBC and RBC the service has now been rolled out to other leading banks enabling Interac debit card customers to use Apple Pay to buy goods and services in the hundreds of thousands of Canadian stores that already accept contactless payments.			Article
O CANADA/ NORWAY — Interac secures first international licence for its contactless and mobile debit solutions	Interac plans to collaborate with BankAxept, Norway's domestic debit network to help accelerate the rollout of contactless and mobile debit solutions in Norway. The licensing agreements will help enable BankAxept to deliver a secure and cost-effective contactless point-of-sale solution in Norway. This is the first Interac payment solutions client and demonstrates the potential for regional debit card company co-operation.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### **Key developments in North America – 2 (Canada)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
© CANADA – TransferWise launches in Canada	TransferWise a leading consumer financial technology start-up, has launched its peer to peer international money transfer platform in Canada. The company has been recognised for its innovative approach by the World Economic Forum as a Tech Pioneer, included as a CNBC 50 disruptor, in the Forbes FinTech 50 list and its mobile app was recognised as Apple's Most Innovative App, 2015. 3 million Canadians live abroad and almost 7 million people live in Canada from overseas. They will now be able to send Canadian dollars to any of the 60 countries and 35 currencies on TransferWise's international money transfer platform.			Article
8 CANADA – RBC Tests distributed ledger for remittances and loyalty programme	Royal Bank of Canada (RBC) has started working on a new proof of concept (PoC) for distributed ledger-based remittances using technology offered by industry start-up Ripple.  RBC and Ripple are now working on a limited production Pock with the goal of evaluating how the distributed ledger trial could impact other areas of the bank's business if more widely implemented. Notably, the release comes amid a broader push by Ripple to promote awareness about its partnerships with financial incumbents.			Article

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#### **Key developments in North America – 3 (Mexico)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
MEXICO – Cuallix and UnionPay issue first UnionPay card in Mexico	UnionPay and Mexican issuer Cuallix bring first UnionPay cards to Mexico. China is the second largest trade partner of Mexico, and the two countries have established a comprehensive strategic partnership of cooperation. More than 80% of ATMs and 100,000 merchants in Mexico accept UnionPay cards.			Article
MEXICO –     Gemalto teams with     Prosa to bring mobile     payments to Mexican     banks	Gemalto and PROSA, one of the largest payment processors in Latin America, has announced a partnership to bring mobile payments to Mexico. PROSA has operations in eight Latin American countries and will provide mobile payment services to all customers, which include 95% of credit, debit and prepaid card issuers in Mexico. Gemalto's Allynis Trusted Service Hub (TSH) will enable new customer on-boarding allowing banks to launch their own NFC mobile payment wallets utilising host card emulation (HCE).			Article

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#### **Key developments in North America – 4 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
② UNITED STATES - Industrial and Commercial Bank of China (US) issue first UnionPay in U.S.	UnionPay and Industrial and Commercial Bank of China (US) (ICBC US) have issued the first UnionPay credit card in New York. It's both the first UnionPay credit card issued in the US market and the first credit card issued by a Chinese commercial bank in the US. So far, UnionPay International has worked with ICBC to issue cards in more than 20 countries and regions such as Canada, New Zealand and Singapore.			Article
UNITED STATES – Citi acquires Costco Amex portfolio	Citi has signed an agreement with American Express to acquire Costco's U.S. co-brand credit card portfolio. The transaction is expected to close in mid-2016 at which time Citi will begin issuing Costco credit cards. Citi is currently working with Costco to provide a new value proposition to its 51 million members.			Article
UNITED STATES – VISA takes major stake in Square	Square Inc has. revealed that Visa holds about 4.19 million of Square's Class B shares, which don't trade publicly. Visa has the option to convert those shares to as much as 3.52 million Class A shares, currently equal to a 9.99% stake in the publicly traded share class. Visa, hasn't historically acquired companies like Square. Analysts commented that the disclosure "served as a vote of confidence" in Square's business and "a reminder of Square's attractiveness as an acquisition target."			Article

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#### **Key developments in North America - 5 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES –     ExxonMobil launches     Speedpass+ mobile     payment app with     Apple Pay	ExxonMobil has become the first major fuel retailer to accept mobile payment at the pump, including Apple Pay, throughout the majority of its U.S. network. The Speedpass+ mobile payment app can be used at more than 6,000 Exxon- and Mobil-branded petrol stations in the U.S. Customers have the option to select Apple Pay as a default form of payment from within the app.			Article
UNITED STATES - FIS and PayPal make the case for cardless cash at the ATM	Building on a February announcement, FIS and PayPal are extending their collaboration using FIS Paydiant technology and a new partnership with Payment Alliance International (PAI). Paydiant and FIS Cardless Cash™ ATM technology will be made available at more than 72,000 ATM locations across the U.S., allowing consumers to get cash from ATMs using their mobile devices.			Article
S UNITED STATES – Google ditches Wallet debit card	Google has closed its Google Wallet Card launched in 2013 and as of June 30 <sup>th</sup> 2016 its physical card will no longer be accepted as a funding mechanism. The Wallet Card was designed as a "universal" card that would replace all the other plastic in your wallet.			Article
UNITED STATES –     Samsung Pay adds     loyalty cards in the US	Samsung Pay has added functionality enabling U.S. users to upload and store merchant membership and loyalty cards in the Samsung Pay wallet. To use membership or loyalty cards, users simply launch the Samsung Pay app, select the appropriate card, hold their Samsung Galaxy smartphone screen up to the merchant's scanner, and let the card's barcode be scanned at the register.			Article

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#### **Key developments in North America - 6 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
S UNITED STATES – Samsung Pay Partners with Global POS Providers to Accelerate Mobile Payments Adoption	Samsung has announced partnerships with the world's largest POS makers, including Verifone Ingenico Group and First Data. Samsung Pay uses both Near Field Communication (NFC) and Magnetic Secure Transmission (MST) Samsung's innovative technology that delivers secure transactions for new EMV chip and NFC terminals, as well as traditional, magnetic strip terminals. The agreement plans to support systematic testing and validating of different POS systems to ensure compatibility and universal acceptance for Samsung Pay.			Article
Southwest Airlines introduces Pay with Amazon	Southwest Airlines has launches Pay with Amazon on board its WiFi-equipped aircraft to enable customers to pay for products through the carrier's on-board entertainment portal using their Amazon account as an alternative to supplying credit card details.			Article
3 UNITED STATES – Square targets e-commerce with new API	Square has launched a new e-commerce API that enables merchants to process online payments on their own self-hosted, fully developed websites. The API is part of a new set of tools called Build with Square enabling retailers to seamlessly integrate their sites with the payments processor.			Article
3 UNITED STATES – Square integrates with Facebook Ads to drive customer sales	Square has introduced Facebook Ad integration, enabling clients to use its platform to buy and target advertising on the social network. Part of Square's customer engagement suite of tools, the new feature means that Facebook Ads results and Square sales data are integrated, meaning that the marketing spend can be linked to actual sales. The feature was built with LocBox, a marketing start-up bought by Square and will be rolled out to other social channels.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### **Key developments in North America - 7 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES – BBVA And Univision launch digital money transfer products	Univision Enterprises a leading media company serving Hispanic America, has partnered with Houston based BBVA subsidiary Bancomer Transfer Services, to launch Univision Remesas, an international digital money transfer service for Hispanics. Available on iOS, Android, Web, and Mobile Web, the bilingual digital service was developed with UCI's key demographic in mind: the more than 57 million Hispanics in the U.S.			Article
UNITED STATES – Ingo Money introduces cheque – splitting features	Atlanta based Ingo Money has introduced check splitting feature that enables users to cash a check via a smartphone app and send the funds instantly to multiple accounts.  Through the Ingo Money service, underwritten by First Century Bank, users can access their full check funds in minutes, irreversibly, and then quickly fund bank accounts, pay credit card bills, and make purchases.			Article
4 UNITED STATES – Bank of America and US Bank switch on real-time mobile P2P	As the U.S. continues to develop faster payments solutions, real-time payment provider Early Warning in partnership with Bank of America ad U.S. Bank has started actively processing real-time person-to-person (P2P) transactions through Early Warning's clearXchange™ network. Customers at both banks are now able to send eligible real-time P2P payments to customers at either bank, with funds made available for use. The solution is unique in its ability to provide consumers with immediate access to funds, directly in their bank account. Bank of America and U.S. Bank have a combined reach of nearly 22 million mobile banking customers in the U.S.			Article

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#### **Key developments in North America - 8 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES – Walmart Introduces Walmart Pay	First launched in late December Walmart has reported that its own Walmart Pay wallet is now is now available in all its more than 4,600 stores nationwide. Available through the Walmart app, Walmart Pay works with any iOS or Android device*, at any checkout lane, and with any credit, debit, pre-paid or Walmart gift card. The company claim that more than 20 million customers actively use the wallet.			Article
<b>⑤</b> UNITED STATES − Jack Henry joins The Clearing house for real-time payments push	Leading technology solutions and payment processing services provider Jack Henry & Associates through its JHA Payment Solutions™ group has partnered with The Clearing House (TCH) to expand the scope of U.S. financial institutions equipped to send and receive new real-time transactions. TCH is currently working to build a new real-time payment system, which TCH will own and operate. In partnering with JHA Payment Solutions, TCH will greatly expand the new system's reach and advance the goal of real-time payment ubiquity.			Article
• UNITED STATES  - The Clearing House partners FIS to test real-time payments	As part of its move to offer real time settlement, The Clearing House (TCH) and FIS have announced that they are preparing to launch a pilot with early-adopter financial institutions, initially focusing on the bill payment use case, using FIS technology and operating via the TCH real-time payments platform. Already under development, the pilot will go live in the first quarter of 2017, and bring payments that clear and settle in real-time to the pilot financial institutions.			Article

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#### **Key developments in North America - 9 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul><li>UNITED STATES</li><li>MoneyGram And</li><li>Hyperwallet</li><li>announce</li><li>partnership</li></ul>	Hyperwallet a leading global payouts provider to millions of independent workers has strengthened its partnership with MoneyGram. Using Hyperwallet's API integration, users will be able to pick up their earnings at thousands of worldwide MoneyGram locations within just minutes of submitting their request.			Article
8 UNITED STATES  - CGI adds Ripple gateway to payments portfolio	CGI has successfully integrated Ripple's distributed financial technology into the CGI portfolio of payments solutions to assist in the digital transformation of its clients. CGI's Intelligent Gateway is one of the first payments solutions in the industry to integrate Ripple's distributed financial technology and provides a solution-agnostic, transformational wrapper around a client's payment processing systems.			Article
UNITED STATES – Fitbit buys Coin assets for wearable payments play	Health and fitness wearable company Fitbit, Inc. has acquired the wearable payment assets of Coin, a Silicon Valley consumer electronics and financial technology company. The deal includes key personnel and intellectual property specific to Coin's wearables payment platform. While there are no plans to integrate Coin's wearable payments technology into the 2016 Fitbit product roadmap, the acquisition accelerates Fitbit's ability to develop an active NFC payment solution that could be embedded into future Fitbit devices. The acquisition excludes smart payment products, such as Coin 2.0.			Article

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#### **Key developments in North America - 10 (United States)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED STATES - Coin launches developer programme for wearable payments	Coin has established a developer program for accelerating the integration of payments into wearables. The program will enable access to the MasterCard Digital Enablement Service (MDES) to securely digitize MasterCard payment credentials and further reduce the barrier to entry for device manufacturers. The program, compatible with a range of wearables such as fitness bands, smart watches and jewellery.			Article
<ul> <li>UNITED STATES         <ul> <li>MasterCard and</li> <li>Parsons School of</li> <li>Design run Fashion</li> <li>Design Hack</li> </ul> </li> </ul>	MasterCard is teaming up with New York based The New School's Parsons School of Design to bring a forward-thinking, design-led approach to payments technology. In a Fashion and Design Hack sponsored by the two organisations, teams of students will compete to develop solutions and build prototypes for connected commerce by embedding payments functionality into products, new designs or concepts.			Article
UNITED STATES –     MasterCard present     Virtual Reality and     Payment Wearables     Tee Off at the Arnold     Palmer Invitational     Golf Tournament	MasterCard has showcased its vision of the future of commerce to life with virtual and augmented reality commerce experiences and payment enabled wearables at the Arnold Palmer Invitational Presented by MasterCard (API) in Orlando, FL. MasterCard has collaborated with Wearality, an Orlando-based start-up that designs virtual reality glasses and wearables, to allow consumers to identify an item within the experience – such as a golf shirt – and buy it without leaving the virtual world.			Article

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# **Key developments in South and Central America**



# **Key developments in South and Central America**



#### **Key developments in South and Central America – 1 (Brasil)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
S BRASIL – Samsung Pay launches in Brasil	Samsung Pay has taken its first foray into South America – the first of the 'Pays' to do so, in July launching its service with major issuers including Banco do Brasil, Brasil Pré-Pagos, Caixa, Porto Seguro, and Santander. Most MasterCard and visa cards issued by these banks are supported. According to research by FEBRABAN (the Federation of Brazilian Banks), mobile banking usage is on the rise growing by 138 percent in 2015 with more than 11 billion bank transactions through smartphones.			Article
<ul><li>❷ BRASIL -</li><li>Ingenico &amp; TW2</li><li>Iaunch POS service</li><li>in Rio</li></ul>	Ingenico Group and TW2 has launched POS CONTROLE, a POS based customer service application at one of Brazil's largest soccer arenas. The installation in Rio de Janeiro combines POS CONTROLE along with Ingenico's iWL280 wireless terminal, using Bluetooth, WI-Fi or 3G communication and will allow visitors to have their food and beverage orders taken on the move, at any time during the game. The solution will deliver a full checkout system for all payment methods, including electronic and cash at 60 concessions within the stadium.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### **Key developments in South and Central America – 2 (Brasil / Cuba)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
BRASIL - Visa brings contactless rings to Rio Olympic Games	Visa, the exclusive payment provider at the Olympic and Paralympic Games, showcased the first payment wearable ring backed by a Visa account at the Rio Olympic Games. The Visa payment ring was given to all Team Visa athletes in Rio, a group of 45 Olympic hopefuls from around the world. The ring uses the patented NFC Ring® design of McLear & Co. that includes a secure microchip made by Gemalto, with an embedded NFC-enabled antenna, enabling contactless payment capabilities.			Article
© CUBA – BISCA and UnionPay launch first UnionPay card in Cuba	In another international joint venture increasing its global footprint UnionPay International has announced a deal with RED.S.A, an acquirer in Cuba, to issue the first UnionPay card in the country through RED.S.A's partner BISCA. This is the first international card brand to enter the local market.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe**



# **Key developments in Europe**



 MasterCard agrees GBP700M VocaLink acquisition



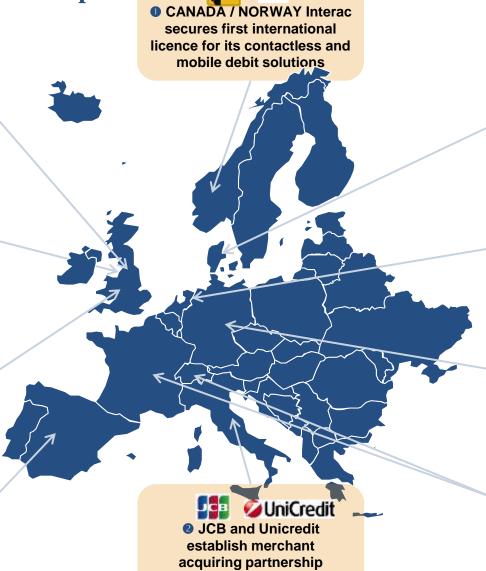
Android Pay launches in United Kingdom



 UNITED KINGDOM & AUSTRALIA –
 Barclays & Commonwealth Bank link mobile apps



S PayPal payments come to Vodafone mobile wallets



axept



 Carta Worldwide and Nets partner to offer secure mobile payments



 ABN Amro enables customers to change debit card settings via m-banking app



CENTER

PayCentre and JCB launch first JCB card in Germany



S FRANCE & SWITZERLAND – Apple Pay extends to first mainland European countries

# **Key developments in Europe – 1 (Denmark / Finland)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
DENMARK – Carta Worldwide and Nets partner to offer secure mobile payments	Carta Worldwide and Nets Group have announced a partnership that brings secure mobile payments solutions to banks across Northern Europe. As part of the partnership Carta will deliver its Token Processing Appliance (TPA) to processors, networks and large issuers. The service is designed to be compatible across mobile payment solutions and supports both global and local payment schemes.			Article
DENMARK – Nets and JCB partner to drive mobile payments in Denmark	Nets and JCB have entered into a partnership agreement which will allow Nets to use J/Speedy, JCB's contactless technology, for Dankort payments with smart phones. As a result of the partnership agreement Nets will, with support from terminal vendors and integrators, gradually prepare Danish terminals to accept payments with Dankort via mobile phones. Once this is in place, JCB card members can benefit from making J/Speedy contactless payments when visiting merchants in Denmark that accept JCB cards.			Article
4 FINLAND – Finnish S-Bank introduces fuelling mobile app	S-Bank, part of the S Group – a Finnish network of co-operative retail and service sector companies with more than 1600 outlets – is launching a ground-breaking fuelling service based on mobile technology and a unique app which combines retail, banking, and fuelling. At the station, S-Mobile automatically recognizes the customer's location. Fuelling can be initiated by simply choosing the correct gas pump from the app. After fuelling, the payment is handled automatically by the S-Bank Visa card, linking the payment with customer loyalty benefits.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Europe – 2 (France)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWITZERLAND – Apple Pay extends to first mainland European countries	Apple Pay has rolled out to mainland Europe with July launches in France and Switzerland. Cardholders with selected MasterCard and Visa cards issued by Banque Populaire, Caisse d'Épargne and Carrefour Banque are amongst the first to be able to use the wallet. A more limited launch in Switzerland sees card issuers Bonus Card, Cornercard and Swiss Bankers Prepaid enable their MasterCard and Visa cards.			Article  Article
	Ingenico Group has acquired Think&Go NFC, a start-up provider of connected screens. Founded in 2010, employing a staff of fifteen, Think&Go NFC has developed a technology that enables any kind of digital display to interact with connected objects such as smartphones and transit passes. As a result, the connected screens become a vehicle for marketing tools like drive-to-store, couponing, loyalty programs and downloads. With fifteen innovation awards, two patents and 150 screens deployed, the company has already contributed to the global standing of French FinTech.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 3 (Germany / Italy)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
② GERMANY – PayCentre and JCB launch first JCB card in Germany	JCB, PayCenter GmbH, a leading German prepaid card issuer, and petaFuel, a card processor of PayCenter have introduced the first JCB-girocard co-badged card in Germany. The product named "CardDuo" is a prepaid card which combines the functionalities of JCB alongside girocard (payment scheme operated by the German Banking Industry Committee). The brand-new product is not only the first prepaid card co-badged with girocard, but becomes the first JCB prepaid card issued in Europe.			Article
GERMANY – Deutsche Bank and Hansa Orga introduce plug and play integration	Hanse has introduced its "HO Global Format Integrator" a "plug & play" solution for companies wishing to configure and establish international transaction messages faster and more easily in their SAP system. The "HO Global Format Integrator", which was co-developed by Deutsche Bank, will provide corporate customers with pre-tested templates for ISO 20022 XML and hence reduce the technical effort for integrating transaction services into the SAP system.			Article
2 ITALY – JCB and Unicredit establish merchant acquiring partnership	In another move, JCB and UniCredit have launched a partnership that will broaden JCB card acceptance in Italy for tourism and business. The deal enables the use of JCB cards at UniCredit ATMs and Italian merchants who are clients of the banking group, significantly increasing JCBI's presence in the Italian market and offering more choices to UniCredit customers.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Europe – 4 (Netherlands)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
• NETHERLANDS - Dutch banks' Ideal payments platform reports soaring growth	The iDEAL online payment product (iDEAL is a standard payment method for making secure online payments directly between bank accounts operated by the Dutch Banking Association) reported record usage in 2015 with more than 222M transactions being made a 23.2% year-on-year increase.	•		Article
NETHERLANDS – MasterCard tests 'selfies' biometric authentication ahead of international rollout	MasterCard reports that following a 750 strong cardholder trial by Dutch Bank ABN Amro biometrics payment pilot participants prefer fingerprints and facial recognition authentication to passwords. Nine out of 10 participants indicated that they would like to replace their password with biometric identification. The company plan extending the technoolgy to North America and parts of Europe later in 2016.			Article
NETHERLANDS –     ABN Amro enables customers to change debit card settings via m-banking app	ABN Amro has introduced upgrades to its Dutch mobile banking app which sees 60 million log-ons a month. Providing customers greater control the app can be used to make various setting changes their linked debit card. For example, clients can adjust their ATM and POS limits thereby increasing a limit to make a large purchase and lowering it once they have paid.			Article
NETHERLANDS –     Rabobank's MyOrder app drives mobile refuelling	The mobile payments subsidiary of Rabobank, MyOrder, has introduced a new feature which enables car drivers to pay in advance for fuel at 220 Tamoil petrol stations in the Netherlands. MyOrder subscribers will be able to use their smartphone to select their desired gas station, fuel requirement and make a payment. The app also provides users with direct insight into their refuelling behaviour and spending habits.			Article [PDF]

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



#### **Key developments in Europe – 5 ( Norway / Russia / Spain)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
O CANADA / NORWAY – Interac secures first international licence for its contactless and mobile debit solutions	Interac plans to collaborate with BankAxept, Norway's domestic debit network to help accelerate the rollout of contactless and mobile debit solutions in Norway. The licensing agreements will help enable BankAxept to deliver a secure and cost-effective contactless point-of-sale solution in Norway. This is the first Interac payment solutions client and demonstrates the potential for regional debit card company co-operation.			Article
RUSSIA –     45 Russian Banks     have now joined MIR     domestic payments     system	The Central Bank of Russia continue to report growing interest from domestic banks to join the MIR domestic payments system timetabled for launch at the end of 2016. The Central Bank reports that "45 banks had already joined including the biggest ones such as Sberbank and Alfa"			Article
3 SPAIN – Samsung Pay launches in Spain	June saw the launch of Samsung Pay in Spain, the company's first mainland European market. The service is available to customers of CaixaBank and the bank's mobile only subsidiary imaginBank with Abanca and Banco Sabadell to follow .			Article
SPAIN – PayPal payments come to Vodafone mobile wallets	PayPal and Vodafone have announced, where millions of PayPal's European customers will be able to fund payments on Android smartphones at Visa contactless terminals using the Vodafone Wallet. The service will start in Spain and expand to additional European markets later this year.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 6 (Sweden)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWEDEN - Restaurant POS firm TouchBistro integrates to iZettle	TouchBistro, a leading iPad point-of-sale(POS) solution for restaurants in 35 countries has integrated with iZettle. Servers use the TouchBistro app to take customer orders tableside, or while patrons are in line, and instantly transmits them to the kitchen or bar for preparation. Bills are automatically calculated and split according to the patrons' requests. With iZettle integration, bills totalled by TouchBistro are automatically processed using the iZettle iPad chip and pin or contactless card readers.			Article
SWEDEN – Visa test contactless band at Eurovision song contest	Gemalto and Visa have provided visitors at the 2016 Eurovision Song Contest with contactless payment wristbands. Gemalto's solution for Visa encompassed personalisation, packaging and fulfilment of the contactless wristbands, and utilised its Allynis Smart Event Platform for the prepaid payment program and event management. Part of Visa Europe's official ESC sponsorship the bands were made available for purchase at the Eurovision Village in Stockholm.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 7 (Switzerland)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
FRANCE & SWITZERLAND – Apple Pay extends to first mainland European countries	Apple Pay has rolled out to mainland Europe with July launches in France and Switzerland.  Cardholders with selected MasterCard and Visa cards issued by Banque Populaire, Caisse d'Épargne and Carrefour Banque are amongst the first to be able to use the wallet.  A more limited launch in Switzerland sees card issuers Bonus Card, Cornercard and Swiss Bankers Prepaid enable their MasterCard and Visa cards.			Article  Article
SWITZERLAND –     Top 5 Swiss banks,     SIX and PostFinance     create a single Swiss     mobile payment     solution	Switzerland's five biggest banks and some of the country's main retailers will launch a digital payments system later this year enabling consumers to pay for goods by mobile phone and other digital devices. Supermarket chains Coop, Migros and telecom operator Swisscom are participating in the scheme, which will be open to other retailers as well. PostFinance and SIX have already launched their own mobile payment systems which will be combined with the new "TWINT" system creating a single Swiss system.			Article
SWITZERLAND – New Swiss Interbank Clearing payment system goes live	Switzerland has launched a new interbank payment system (SIC), using the ISO 20022 messaging standard to provide a range of new services to bank and corporate users. After 30 years of operation, the SIC system has been completely redeveloped by market operator SIX on behalf of the Swiss National Bank (SNB) and the Swiss financial centre. The new infrastructure is based on the ISO 20022 message standard, lowering the number of technical interfaces between participants and stripping out the complexity built in to the legacy platform.			Article



<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 8 (Switzerland)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SWITZERLAND – Bulgari, MasterCard and WISeKey deliver first-ever Intelligent Mechanical Luxury Watch	Luxury brand Bulgari, MasterCard and WISeKey announced that MasterCard have launched the first-ever "intelligent mechanical luxury watch" with embedded contactless payment capability – the Bulgari Diagono Magn@sium.  Additional secure access functions planned by Bulgari include the ability to open select automobile doors, Bulgari hotel doors and other participating partners' products.			Article
SWITZERLAND – Mondaine adds contactless payments to new smart watch	Swiss luxury watchmaker Mondaine is to add NFC payment capability to a variety of its watches, starting with its Mondaine Helvetica No1 smartwatch, that will let wearers make payments with a tap of their wrist at any contactless enabled terminal. The company has partnered with Oberthur Technologies and Cembra Money Bank to roll out the capability in Switzerland.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

#### **Key developments in Europe – 9 (United Kingdom)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
UNITED KINGDOM     MasterCard agrees     GBP700M VocaLink     acquisition	MasterCard has announced acquisition of a 92.4% stake in VocaLink Holdings Limited for about GPB700M (~USD920M) Under the agreement, a majority of VocaLink's shareholders will retain 7.6% ownership for at least three years. Based in London, VocaLink operates key payments technology platforms on behalf of UK payment schemes, including BACS – the Automated Clearing House (ACH), Faster Payments – the real-time account-to-account service and LINK – the UK ATM network. In addition, VocaLink licenses its software and provides services to support ACH activities in Sweden, Singapore, Thailand and the United States. The deal will see MasterCard to acquire one of the U.K.'s most important domestic payments providers.			Article
<ul> <li>UNITED KINGDOM         <ul> <li>PayPort by</li> <li>VocaLink awarded</li> <li>vendor accreditation</li> <li>from Faster</li> <li>Payments Scheme</li> </ul> </li> </ul>	PayPort by VocaLink an end-to-end service that offers banks and other financial institutions fast, efficient and secure access to Faster Payments without the cost of introducing a new technology infrastructure, has gained Vendor Accreditation from Faster Payments Scheme Limited (FPSL). FPSL claims the new technical accreditation service will level the playing field for access to the Faster Payments service.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 10 (United Kingdom)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul><li>UNITED KINGDOM</li><li>Vocalink signs deal with UnionPay International</li></ul>	VocaLink has signed a five year deal with UnionPay International enabling UnionPay cardholders to access ATMs in the UK and continental Europe. Under the deal, VocaLink will provide ATM transaction processing and UnionPay sponsored access, providing acquirers with a fast go to market solution. UnionPay observed that on average, the value of UnionPay card withdrawals from UK ATMs are five times the average value of UK ATM withdrawals.			Article
S UNITED KINGDOM  - Android Pay launches in United Kingdom	May saw the launch of Android Pay in the United Kingdom, the first market outside the United States. Available to most major bank cardholders, with the notable exception of Barclays, the wallet can be used at contactless terminals including across the London transport system.			Article
<ul> <li>UNITED KINGDOM         <ul> <li>Barclays Bank caves in to Apple Pay, but goes alone with Android alternative</li> </ul> </li> </ul>	Barclays Bank has bowed to the inevitable and joined the rest of the UK's biggest banks in introducing Apple Pay support. The big UK bank has been a reluctant stand out against Apple Pay. While supporting apple Pay the bank says it currently doe not plan to support the recent launch of rival service Android Pay, preferring instead to go it alone with its own Barclaycard app which includes support for HCE-based NFC mobile payments.			Article
3 UNITED KINGDOM  - PayPal Here SDK signs first U.K. businesses	PayPal has announced the first partners to adopt its PayPal Here SDK in the United Kingdom enabling these businesses to trade in-store and on-the-go using smartphones and tablets as their point-of-sale (POS). Partners include Autocab the world's largest supplier of cloud-based taxi booking and dispatch system.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Europe – 11 (United Kingdom)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
• UNITED KINGDOM  - Access to U.K. faster Payments expands	Raphaels Bank has become the first new fully operational participating financial provider of Faster Payments, the UK's 24/7 real-time payment service. The bank is the 12th direct participant of the Faster Payments Scheme, and the first new bank to connect directly to the payment system since it was launched in 2008. Raphaels is using its participation to act as a sponsor - enabling other payment service providers (PSPs) to access true, 24/7 real-time payments via its connection.			Article
• UNITED KINGDOM  - Payments UK launches SEPA directory and open API	Payments UK has launched an accessible directory simplifying cross-border SEPA payments into the United Kingdom. From February Eurozone banks and Payment Service Providers (PSPs) have been able to process SEPA payments using only a customer's IBAN (International Bank Account Number), meaning that they no longer need the Business Identifier Code (BIC) of the PSP they are intending to pay. Although the rule does not apply to the UK until October, Payments UK has worked with Swift to build a SEPA IBAN-only directory that provides PSPs with a way of deriving the BIC from the IBAN.			Article
• UNITED KINGDOM - Payments UK launches Standards Collaboration Framework	Payments UK, has launched a new one-stop shop designed to help the industry better access and implement the standards it relies on. The new service, called the Standards Collaboration Framework, will provide the capability for the industry to future-proof standards requirements with a single, authoritative resource. It will provide rigorous version control and make it possible for relevant industry stakeholders to obtain all the up-to-date standards documentation crucial to supporting the UK payments infrastructure.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 12 (United Kingdom)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
• UNITED KINGDOM  - PayPort by Vocalink awarded vendor accreditation from faster payments	PayPort by VocaLink has become one of the first platforms to gain Vendor Accreditation from Faster Payments Scheme Limited (FPSL), helping to facilitate a level playing field between larger established financial institutions and up and coming challenger banks. PayPort is an end-to-end service that offers banks and other financial institutions fast, efficient and secure access to Faster Payments without the cost of introducing a new technology infrastructure.			Article
<b>6</b> UNITED KINGDOM - Barclays backs UK launch of social payments app Circle	Social payments company Circle has launched in the UK with the support of Barclays Bank and an e-money issuer license from the Financial Conduct Authority. UK consumers can send and receive cross border payments with instant conversion between pound sterling and US dollars with zero fees. For payments transferred to countries where Circle hasn't yet launched, the company uses the bitcoin blockchain to transfer currencies in and out of the national denomination.			Article
© UNITED KINGDOM & AUSTRALIA - Barclays and Commonwealth Bank link mobile apps	Barclays is teaming up with the Commonwealth Bank to enable customers to send instant mobile payments around the world with just a phone number. Barclays has connected its Pingit m-payments app to CBA's equivalent, CommBank, for the service, letting their respective customers transfer funds without needing to enter banking details. By teaming up with each other, Barclays and CBA hope that they can grab a bigger slice of the fast growing international money transfer sector, which has seen a host of new entrants, such as TransferWise and Azimo, undercutting banks.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Europe – 13 (United Kingdom)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul> <li>UNITED KINGDOM</li> <li>Contactless</li> <li>charity donation tin</li> <li>launched</li> </ul>	Elavon, a wholly owned subsidiary of US Bancorp has worked closely with Cancer Research UK to build the foundations for a contactless donations service which will allow consumers to use their cards when donating to the charity, the first mobile contactless only donations service roll-out of its kind in the world. In 2014, 55% of all donations direct to charities in the U.K. were made with cash, so it's important that as card payments represent an increasing share of consumer spend, charities look for new solutions to help them replace valuable cash income. The solution incorporates a secure card-reader which replaces the usual slot found at the top of a charity tin.			Article
<ul><li>UNITED KINGDOM</li><li>U.K. Government maps out Fintech strategy</li></ul>	The UK Government is stepping up its support for the country's burgeoning fintech sector with the creation of a new strategy unit, start-up information hub and bridge to global markets. In a keynote speech at the 2016 Innovate Finance Global Summit the Economic Secretary to the Treasury, Harriett Baldwin, said the new measures have been developed in response to recommendation made in an EY report released earlier this year which ranked the UK as the number one place to flourish as a fintech company, above other tech hotspots such as California, New York and Singapore.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Europe – 14 (United Kingdom)**

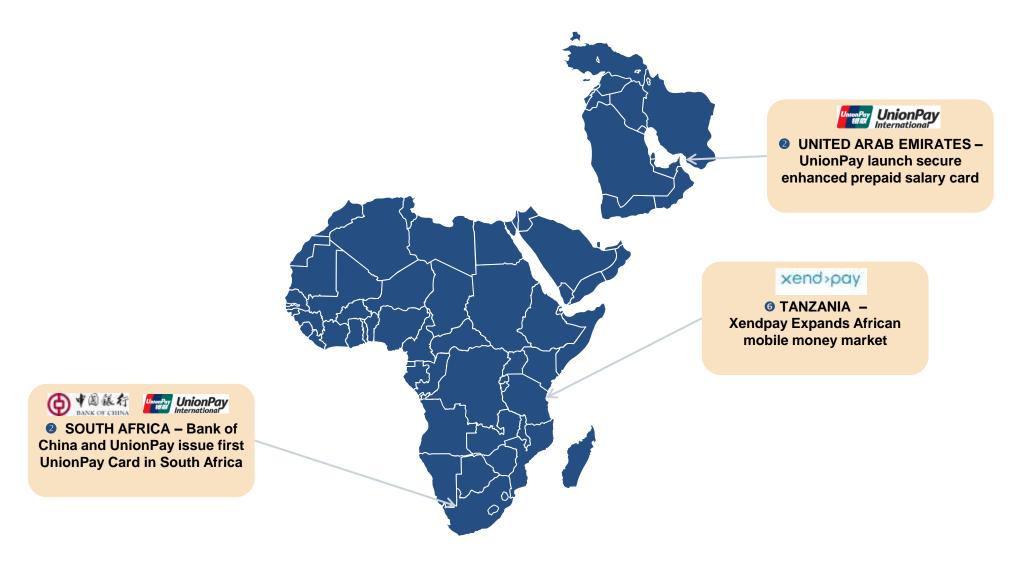
Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
8 UNITED KINGDOM & JAPAN – Rakuten opens blockchain development lab in Northern Ireland	Japanese e-commerce giant Rakuten has opened a blockchain development lab in Belfast, Northern Ireland to cater for its expanding portfolio of investments in the fintech arena. The new Lab will be positioned as a dedicated research and development organisation within Rakuten, focused on blockchain technology and its potential applications in the fintech and e-commerce sectors. The establishment of the facility follows the acquisition by Rakuten of IP assets from Bitnet Technologies, operators of a digital payments platform powered by blockchain.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Africa** and the Middle East



# **Key developments in Africa and the Middle East**



#### **Key developments in Africa and the Middle East – (South Africa / Tanzania / U.A.E.)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SOUTH AFRICA – Bank of China and UnionPay issue first UnionPay Card in South Africa	Bank of China Johannesburg which in July 2015 was nominated as the first cross border Renminbi clearing bank on the African Continent has issued the first prepaid UnionPay card in South Africa.			Article
<b>6</b> TANZANIA – Xendpay Expands African mobile money market	Working with mobile network operators M-Pesa-Vodafone in Tanzania and Air Tel Money in Burkina Faso, online money-transfer specialist Xendpay has expanded its services in Africa. Additionally Xendpay will add Nigeria's currency to its new currencies portfolio. The company currently serves more than 170 different countries and more than 45 different currencies.			Article
UNITED ARAB EMIRATES – UnionPay launch secure enhanced prepaid salary card	Dubai based Mint Group founded in 2009 -certified by Central Bank of UAE as a WPS agent, processing payroll through the Wages Protection System – has together with Union Pay and local banks launched region's first EMV prepaid salary card.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# Key developments in Asia



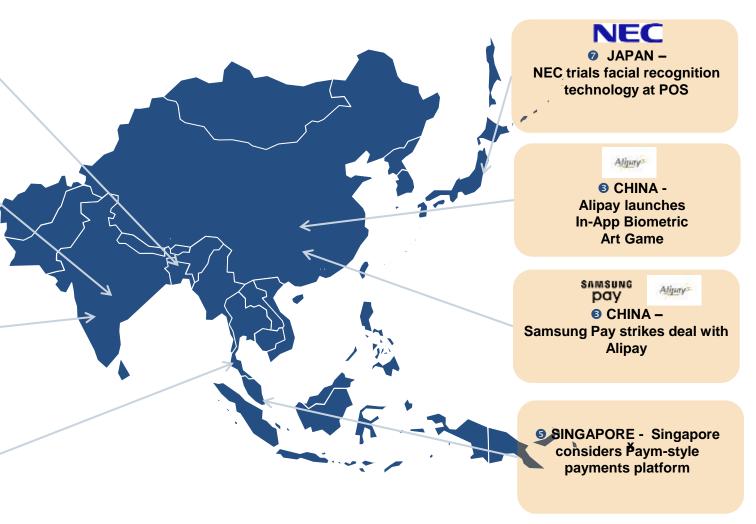
# **Key developments in Asia**





NPCI extends RuPay Debit card

THAILAND – UnionPay operated Thai Payments Network goes live



#### **Key developments in Asia – 1 (Bangladesh / China)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
<ul> <li>BANGLADESH –</li> <li>MasterCard, Western</li> <li>Union &amp; bKash</li> <li>launch mobile</li> <li>remittance service</li> </ul>	MasterCard, Western Union, mobile financial service provider bKash and BRAC Bank has launched an international remittance receiving service in Bangladesh. bKash's registered customers can use their mobile phones to receive remittances from abroad directly into their bKash accounts. Bangladesh is the eighth largest receiver of international remittances in the world.			Article
CHINA – UnionPay and VISA sign MOU	China UnionPay and Visa have signed a Memorandum of Understanding agreeing to collaborate on payments security, innovation and financial inclusion matters. Visa has made this move in advance of China's impending opening of its card processing network to foreign entities.			Article
© CHINA - Alipay owner Ant Financial raises USD4.5BN	At the end of April, Ant Financial Services Group, the financial-services affiliate of e-commerce giant Alibaba Group Holding Ltd., closed the world's largest private fundraising round for an Internet company USD4.5billion, giving it an approximately USD 60BN valuation. Ant Financial, which operates Alipay, China's biggest online-payments platform by transaction volume, raised its latest funding round from a clutch of investors, including a Chinese sovereign-wealth fund and the country's biggest insurers.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Asia – 2 (China)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
CHINA - Alipay Launches In- App Biometric Art Game	Alipay in collaboration with advertising agency DDB China has launched an art project game within its mobile app. Users upload their selfie pictures, and within a few seconds their faces are matched to similar portraits from a selection of about 2,000 famous paintings. The company sees it as a fun way to engage customers with its authentication technology. First announced under the moniker 'Smile to Pay' early last year, the system leverages a user's smartphone camera to perform authentication based on facial recognition.			Article
© CHINA - Geoswift, Western Union include Tenpay as a tuition payment partner	Cross-border payments provider Geoswift and Western Union Business Solutions have announced the inclusion of online payment platform Tenpay, as one of the payment channels in their proprietary online tuition payment portal providing overseas Chinese students and families payments access to approximately 400 universities and higher education institutions across 9 countries in Asia, Europe and North America.			Article
© CHINA – Huawei Launches Chinese NFC payment service	Chinese handset maker Huawei Technologies Co. has teamed up with China UnionPay to offer a service called Huawei Pay. Huawei's latest move will likely intensify the already stiff competition in China's mobile-payment market, where Apple Pay is going up against powerful local competitors.			Article
© CHINA – Samsung Pay goes live in China with UnionPay	At the end of March, in-conjunction with UnionPay, Samsung Pay was launched in China. An initial nine financial institutions including China Construction Bank and Industrial and Commercial Bank of China will be joined by a further six banks including Bank of China.		•	Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Asia – 3 (China)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
Samsung Pay strikes deal with Alipay	Just a couple of month's after its Chinese launch Samsung Pay has struck a deal with Alipay enabling Samsung Pay to make payments using their Alipay accounts.	•	•	Article
© CHINA – Uber signs deal with Alipay to support Chinese travellers	Ride-hailing company Uber has struck a deal that will enable Chinese customers pay for rides using popular their Alipay app when they travel to more than 68 countries and 400 cities. As part of the partnership, Uber's service will now also be available through Alipay's mobile app. Uber's move is designed to give it a leg up in the potentially huge Chinese ride-hailing market, where the company is a distant second place behind local leader Didi Chuxing.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Asia – 4 (India)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
INDIA – NPCI rolls out Unified Payments Interface	The National Payments Corporation of India (NPCI) has launched a new Unified Payments Interface (UPI) to help facilitate the country's push to electronic money. The UPI will generate a virtual address as a payment identifier for sending and collecting money over the counter and online and works on single click two factor authentication. It also provides an option for scheduling push and pull transactions for various purposes like sharing bills among peers. Customers will be able to have multiple virtual addresses for multiple accounts in various banks.			Article
INDIA –     NPCI extends     RuPay Debit card	NPCI has rolled out RuPay Debit services to over 200 District Central Co-operative Banks (DCCBs) under RuPay Debit Card network which now digitises about two-thirds of 675 districts in the country through its network of Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks and Scheduled Cooperative Banks with electronic payment mechanisms.			Article
6 INDIA - Two Major Indian banks join SWIFT global payments initiative	ICICI Bank and AXIS Bank are the first Indian banks to sign up for SWIFT's global payments innovation initiative, joining forces with more than 70 other leading banks globally. The initiative aims to enhance cross-border payments by leveraging SWIFT's proven messaging platform and global reach. In its first phase, the initiative will focus on business-to-business payments. Designed to help corporates grow their international business, improve supplier relationships, and achieve greater treasury efficiencies; the new service will enable corporates to receive an enhanced payments service directly from their banks.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



# **Key developments in Asia – 5 (Japan)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
JAPAN – JACCS and MasterCard launch first mobile wallet service in Japan	MasterCard and JACCS (Japan Consumer Credit Service) Card has launch MasterCard's first mobile payment service in Japan enabling secure payments for Japanese cardholders with NFC-equipped smartphones issued by NTT DOCOMO, KDDI and SoftBank.			Article
JAPAN – NEC trials facial recognition technology at POS	NEC Corporation has started a series of trials for cashless payment services using its facial recognition technologies at small shops inside its head office building in Tokyo. The payment service uses NeoFace facial recognition technologies, featuring NEC's facial recognition algorithm, which have been recognized as providing the world's highest authentication accuracy.			Article
3 UNITED KINGDOM & JAPAN – Rakuten opens blockchain development lab in Northern Ireland	Japanese e-commerce giant Rakuten has opened a blockchain development lab in Belfast, Northern Ireland to cater for its expanding portfolio of investments in the fintech arena. The new Lab will be positioned as a dedicated research and development organisation within Rakuten, focused on blockchain technology and its potential applications in the fintech and e-commerce sectors. The establishment of the facility follows the acquisition by Rakuten of IP assets from Bitnet Technologies, operators of a digital payments platform powered by blockchain.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# **Key developments in Asia – 6 (Malaysia / Singapore)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
● ● MALAYSIA – MyClear to set up new retail payment platform	MyClear, a wholly-owned subsidiary of Bank Negara Malaysia (BNM), has announced the development of a new real-time retail payments platform which is expected to launch in 2017. The enhanced Real-Time Gross Settlement System (RENTAS) will cater for multiple messaging formats including the internationally-recognised ISO 20022.			Article
SINGAPORE –     NETS rolls out small business e-     commerce solution	NETS has rolled out its NETS eCommerce solution, a tie-up with local system integrator, Global Interactive Works, which will enable Singapore retailers to set up online shop fronts instantly with pre-integrated payment options. This new solution, which is targeted at brick-and-mortar businesses, is designed to offer SMEs an affordable and seamless online system.			Article
SINGAPORE –     NETS launches     Android top up     service	Motorists can now top up their NETS FlashPay and Autopass Cards on their Android smartphones. Using the NETS FlashPay Reader app, motorists will no longer need to worry about looking for a top-up terminal for their NETS FlashPay cards to pay for their ERP and parking charges. Previously, foreign motorists could only top up their Autopass Cards at specific top-up locations in Singapore. With this new top-up feature on the app, foreign motorists can use credit cards issued by Singapore or Malaysian banks to top up their Autopass Cards on the go.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### **Key developments in Asia – 7 (Singapore)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
OSINGAPORE – NETS signs deal with Australian Mint for mPOS	Australian payments processing technology provider Mint Payments Limited has signed a strategic partnership agreement NETS to boost Mint's expansion in Asia. The 5 year deal includes development and launch of Singapore's first NETS branded unified mPOS solution, licensed by Mint, that will enable merchants to accept all major credit cards and NETS debit cards as well as establishing a new acquiring partnership for Mint and its channel partners in Singapore, such as ABSS (MYOB Asia), using Mint's omni-channel payments solution.			Article
SINGAPORE – VISA opens first Asian innovations centre	Drawing on the success of Visa's flagship innovation centre in san Francisco the company has announced the setup of the first in a network of new regional innovation centres. The new 7,000 Singapore facility will serve as a destination for clients, partners and developers, across the region to create the next generation of payment and commerce applications.			Article
SINGAPORE – Apple Pay launches in Singapore	Apple Pay launched in Singapore in April initially only supporting American Express issued cards. By the end of May this was extended to support Visa and MasterCard credit and debit cards issued by Singapore's five major banks accounting for over 80% of the country's credit and debit cards on issue.		•	Article
SINGAPORE – Samsung Pay quick to follow with Singapore launch	By June Samsung also launched its wallet in Singapore, initially with MasterCard and Visa with American Express compatibility to follow. Launch banks included Citibank, DBS/POSB, OCBC Bank and Standard Chartered. In a sidebar to the announcement the company said that "Samsung and Singtel will be exploring potential collaborations in the mobile payment space".		•	Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact



### **Key developments in Asia – 8 (Singapore / South Korea / Thailand)**

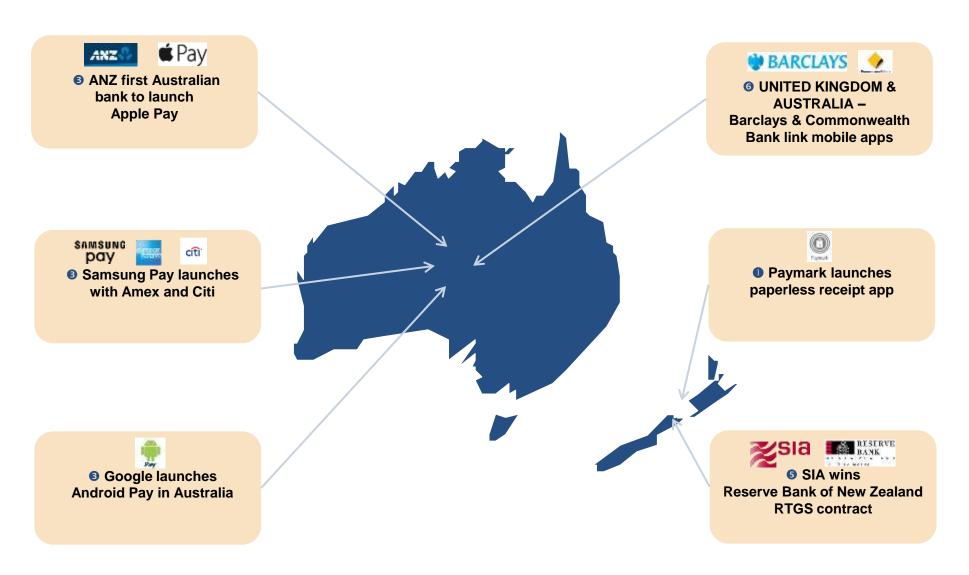
Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
SINGAPORE - Singapore considers Paym-style payments platform	Singapore is looking into the creation of a payments system similar to the UK's Paym that would let someone send money using only the recipient's mobile number, email address or social network account. The all-in-one addressing system - which would mean senders would not need a recipient's bank account details - is being explored by banks and the Monetary Authority of Singapore.			Article
SOUTH KOREA – Samsung Pay report 100 million unique transactions in seven countries	In August Samsung Pay celebrated its first anniversary of operation with the company announcing the wallet had handled about 100 million unique transactions in seven countries it operates in. In Korea more than 2 trillion won (about USD 1.8BN) in transactions with more than 25 percent of the transactions made online.			Article
THAILAND – TB 100m (~USD3m) budget set by ITMX for national payment scheme	Thailand's NATIONAL ITMX will allocate a budget of around Bt100 million to provide an interface for banks so they can access and manage information as part of preparation for a national e-payment system to be developed under a 5 year deal with VocaLink. The Bank of Thailand will be the coordinator of the system with the National Broadcasting and Telecommunications Commission and the Interior Ministry, as they will synchronise mobile-phone numbers and personal identity cards.			Article
THAILAND – UnionPay operated Thai Payments Network goes live	UnionPay International and Thailand's top four commercial banks have launched the Thai Payment Network a transaction switching network based on UnionPay's technical standards. It will process local payments and provide a switching service for processing payments with UnionPay debit cards.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

## **Key developments in Australia** and **New Zealand**



### **Key developments in Australia and New Zealand**



### **Key developments in Australia and New Zealand – 1 (Australia)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
AUSTRALIA – MasterCard launch SpendingPulse report	MasterCard Advisors, a unit of MasterCard has launched SpendingPulse™ in Australia, a report that provides a macroeconomic analysis of retail performance and spending. The report uses aggregated and anonymous transaction data, along with all other payment forms including cash, to offer insight into consumer spending trends, providing an early overview of market indices to help retailers, investors, card issuers, banks and government agencies in their decision-making processes.			Article
3 AUSTRALIA – ANZ first Australian bank to launch Apple Pay	ANZ became the first major bank to offer ANZ to a broad customer base following Apple Pay's earlier tie up with American Express. ANZ claim the tie up has sparked a surge in applications for credit cards and deposit accounts, which has forced the other major banks to re-enter negotiations with the technology giant.			Article
Samsung Pay launches with Amex and Citi	Following Apple Pay's lead Samsung Pay arrived in Australia in June. In more restricted availability Samsung Pay can be used with American Express issued cards and Citibank Visa Cards.		•	Article
AUSTRALIA – Google launches Android Pay in Australia	Android Pay has become the third of the 'Pays' to launch in Australia with a July debut. While ANZ is again the only major to embrace the wallet a tie up with Cuscal has enabled Android Pay to quickly achieve a broader customer base than its rivals. Through Cuscal the wallet extends to close to 30 financial institutions and more than 2 million MasterCard and Visa cardholders.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### **Key developments in Australia and New Zealand – 2 (Australia)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
3 AUSTRALIA – Four Australian banks seek competition commission permission to negotiate collectively with Apple	In July Commonwealth Bank, National Australia Bank, Westpac and Bendigo Bank have this week applied to the Australian Competition and Consumer Commission (ACCC), asking permission to negotiate as one with Apple. The banks are seeking to join forces and negotiate as a bloc with technology giant Apple, which could lead to a collective boycott of Apple Pay, in a bid to offer "digital wallets" on the iPhone. By August the ACCC in an interim ruling said "Given the complexity of the issues and the limited time available, the ACCC has decided not to grant interim authorisation at this time." "The decision is not indicative of whether or not a draft or final authorisation will be granted. The ACCC requires more time to consult and consider the views of industry, consumers, and other interested parties." A draft decision is expected to be released in October 2016.			Article
4 AUSTRALIA – NAB Launches mobile payment app	In January NAB issued its own mobile wallet NAB Pay. At launch to use NAB Pay, customers need a compatible Android device, have downloaded the latest NAB Mobile Internet Banking App and have a NAB Visa Debit card. In June enhancements saw Visa Credit Cards being added alongside a facility whereby customers can now continue using their personal Visa credit cards through NAB Pay within minutes of a replacement card being issued if their card has been lost or stolen. This new instant card feature means customers who have NAB Pay on their compatible Android device can keep paying with their replacement card, without having to wait days for their physical card to arrive in the mail.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### **Key developments in Australia and New Zealand – 3 (Australia)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
© UNITED KINGDOM & AUSTRALIA - Barclays and Commonwealth Bank link mobile apps	Barclays is teaming up with the Commonwealth Bank to enable customers to send instant mobile payments around the world with just a phone number. Barclays has connected its Pingit m-payments app to CBA's equivalent, CommBank, for the service, letting their respective customers transfer funds without needing to enter banking details. By teaming up with each other, Barclays and CBA hope that they can grab a bigger slice of the fast growing international money transfer sector, which has seen a host of new entrants, such as TransferWise and Azimo, undercutting banks.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

### **Key developments in Australia and New Zealand – 4 (New Zealand)**

Development	What and why important	Innovation Quotient *	Industry Impact *	Reference information
NEW ZEALAND – Paymark launches paperless receipt app	Paymark has launched an application called Paypr which provides receipt data digitally. When a card that has subscribed to the service – at a cost of NZD per month per user - Paypr generate a digital receipt in real time which is sent directly to cardholders Xero account removing the reliance on collecting paper receipts to manage expenses.			Article
SIA wins Reserve Bank of New Zealand RTGS contract	Italy's SIA has won a contract with the Reserve Bank of New Zealand to implement and support a new real-time gross settlement system that will replace the current Exchange Settlement Account System (ESAS). The Reserve Bank went to public tender for the new system in January 2015 after completing a strategic review of its payments and securities settlement platforms. SIA will use its wholly-owned South African subsidiary Perago to deliver and support the new system.			Article

<sup>\*</sup> See slide ZZ for an explanation of how we assess Innovation Quotient & Industry Impact

# How we rate Innovation Quotient and Industry Impact



### **How we rate Innovation Quotient and Industry Impact**

#### **Innovation Quotient**

For each major development our ICG expert panel have provided an **Innovation Quotient** rating which offers an opinion on how innovative the development is considered. We use the following scale:









Highly innovative – considered a ground breaking initiative that has not been seen elsewhere

Important development that applies technology or processes in an innovative way

Technology or solution development that has a novel approach or important innovation component Not necessarily significant innovation, but in-conjunction with its potential industry impact noteworthy

### **Industry Impact**

We also provide a rating for the expected potential industry impact a given development may have.

To assess the overall impact the two rating should be read in-conjunction with one another. We use the following scale:









Expected to have a very significant impact, most likely on a global scale

Important global impact or a particularly strong localised impact expected

Unlikely to have global reach, but expected to make significant localised impact

Unlikely to make a significant impact

### From The Insights Review

ICG's regular Insights Review includes a dedicated Payments section.



### **More Information – The Insights Review**



ICG's The Insights
Review presents timely
abstract reviews of the
most relevant 'open
published' perspectives
and research reports
from the world's leading
branded management
consulting firms.

The publication ensures that executives and consultants are exposed to the widest range of high quality ideas, techniques and methodologies developed across the management consulting industry globally.

The Insights Review includes a dedicated Payments section providing reviews of the latest management consulting firm perspectives.

More Information about the Insights Review

### SOME OF THE PAYMENT ARTICLES RECENT EDITIONS OF THE ICG INSIGHTS REVIEW

### JULY 2016 EDITION "Influencing Behaviours to Succeed in Everyday Digital Payments" – Accenture

A fascinating piece from Accenture. The authors draw on a study conducted by a team of final-year undergraduate researchers from the University of Bath in the United Kingdom seeking to examine what drives youth acceptance of new digital payment propositions. While based on UK market findings, the framework of consumer behaviours from performance expectancy, trust, risk and social influence make for some interesting and worthwhile insights for anyone looking to promote digital payment

### MAY 2016 EDITION "Charting a Course to an Optimized Payment Platform" – BCG

An article based on bank research by Plantinion, an IT Consultancy subsidiary of BCG with a European focus but of global relevance. The report considers the imperative for centralised standardized payments platforms to enable banks to respond to ever-increasing regulatory requirements, competitive (traditional and challenger) threats and customer expectations, in a fast, efficient, and cost effective manner. Insightfully, the report observes that while most banks surveyed met the regulatory demands imposed in meeting the Single European Payments Area (SEPA) directive, few had gone beyond the requirements to truly optimize underlying payments architecture and functionality.

### MARCH 2016 EDITION "Executive Guide to Immediate/ Real-Time Payments"—Accenture

A worthwhile read for anyone wishing to fill in some detail behind the rapidly evolving move towards immediate and real-time payments systems (The latest real time payments news regularly features in ICG's Retail Payments Innovation and Developments in Transaction Banking Global Industry Radars). A good summary of different worldwide schemes at the end of the report is preceded with some commentary on the definition of faster payments, considerations about ISO 20022 message standards and thoughts about the business case for and opportunities that immediate payments present.

### More information from ICG

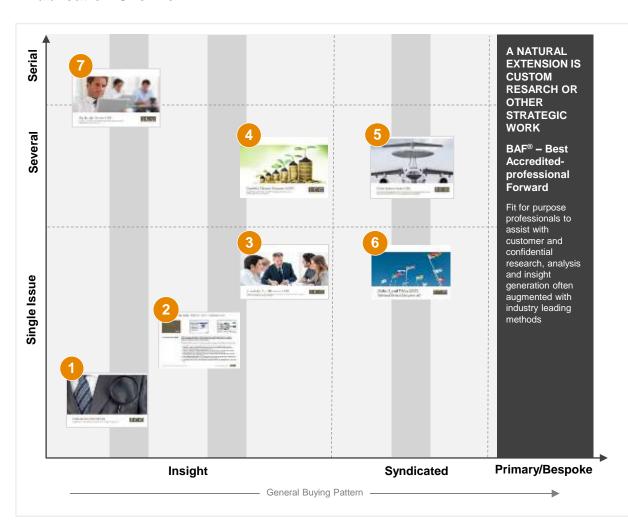
ICG offers a comprehensive range of additional services and sources of information including our regular Insights Review publication.



# Increasing Depth

### Standard or bespoke, single, syndicated or entire library, we offer research and unique publications to meet an evolving set of needs

#### **Publication Overview**



CCS – Certified Case Study

Best publically available information supplemented where possible with mystery shopping.

FKB – Focused Knowledge Brief

Information rich slides summarising leading articles, books and key frameworks along with any published materials on areas of research and/or practice.

KAR - Knowledge Area Review

Synthesised and structured publically available knowledge from across the global on your chosen topic.

CMT – Capability Maturity Framework

Comprehensive description and map of the current state of applied management science in all aspects of business operations.

GIR - Global Industry Radar

Global scan of relevant market evolution, trends, and important innovations and impactful case studies.

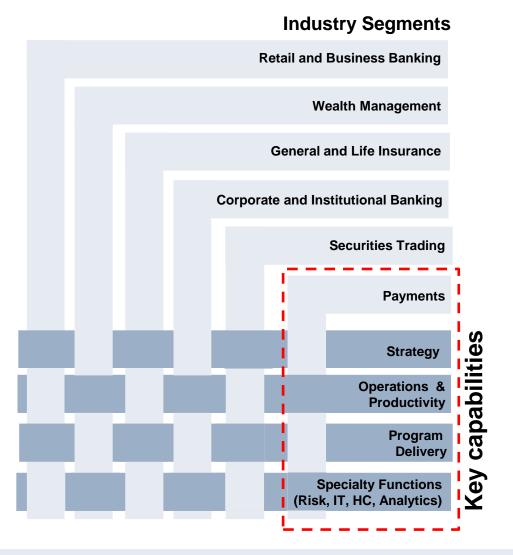
GRT – Global Round Table

Focused collation of expert insights and opinions on a subject matter of interest. Can be convened with local and or global experts.

TIR - The Insights Review

Reviews of published insights from the word's leading branded management consulting firms.

### ICG's Financial Services Practice Group combines segment and functional skills integrated with payments



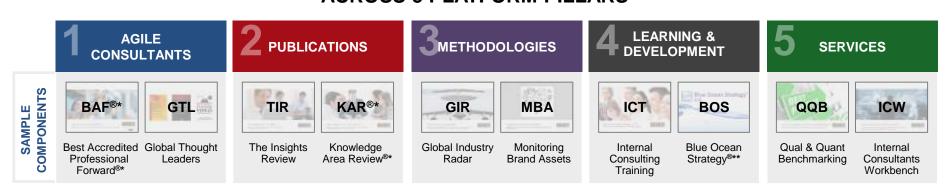
- Clients include the majority of Financial Institutions in Australasia, New Zealand, and in the UK and Canada
- ICG has over 2500 consultants, of which well over 300 professionals are aligned to the financial services industry
- ICG can provide any permutation of subject matter expertise, consulting skills and capacity you need
- A full range of end-to-end strategy skills
- A full range of end-to-end operations expertise (processes and technology)
- A full range of project and program delivery expertise
- A full range of functional and specialty skills including risk, big data, human capital and many more

### ICG's Payments practice leverages the broader capabilities available on the ICG Global platform



### Specifically, the payments practice has successfully deployed the following components across its projects

### MEASURABLY IMPROVE BUSINESS IMPACT BY COMBINING COMPONENTS ACROSS 5 PLATFORM PILLARS



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E.G. Blue Ocean Strategy training and thought provoking business models

Building out the capabilities

### Report contributors and subscribers



### **Report Authors and Payments Practice Subject Matter Experts**

#### **Global Lead Author**



#### K Paul Blond, Sydney, ICG Accredited Professional & ICG GIR Co-ordinator

Paul is an international payments subject matter expert having consulted on payments issues in Australia, the United Kingdom, the United States and over 30 other countries. Paul has been an ICG Affiliate since 2014, managing partner of his own boutique consultancy since 2008 and has over 25 years wide ranging financial services sector experience. Paul is a global reviewer for the payments section of ICG's Insights Review, co-ordinator for ICG's Global Industry Radar publications and was a contributing subject matter expert for the ICG Knowledge Area Review (KAR) The Future & Implications of the Evolving Payments System.

Contact details: Email: paul.blond@internalconsulting.com Tel: (AU) +61 2 9966 1543 / (UK) +44 1932 869538

### **Payments Practice Subject Matter Experts**



Michael Alsop, Sydney, ICG Accredited Professional

Highly experienced senior consultant with focus on strategy and program delivery. Industry expertise in banking/payments, telco and IT working at senior levels in Australia, NZ, USA, UK and Asia.
An acknowledged payments expert in payments innovation.



Geoff Bebbington, Melbourne, ICG Accredited Professional

An acknowledged payments subject expert with 25+ years consulting and financial services experience gained at Accenture, ANZ, CBA and NAB. Ex Chair of BPAY and Deputy Chair of APCA. Assists clients with payments strategy and product development



Julian Cappe, Sydney, Practice Leader Retail & Business Banking

15+ years experience across retail banking in both management and consulting roles. Consultant at McKinsey, then led business lines at Citi and Westpac/BT. Focus on business unit strategy, product design and innovation and strategic pricing



Ryan McQueen, Sydney, ICG Accredited Professional

A seasoned financial services executive and Fintech advisor with international leadership, product, payments, finance, marketing, strategy and transformation experience. Brings over 20+ years of P&L management from organisations including GE, FMCG, ANZ Bank, Westpac Bank.

### **Report Subscribers**

### Region

### **Regional Subscriber**

#### Australia



eftpos is the most widely used debit card system in Australia, accounting for more than 2.3 billion CHQ and SAV transactions in 2015 worth more than AUD\$140 billion.



### Bruce Mansfield, Managing Director, eftpos Payments Australia

Bruce is responsible for the development and management of eftpos' business activities in line with the Board-approved strategic plan. Before joining eftpos, Bruce previously held a number of senior executive positions for Visa Inc. Bruce is a seasoned executive in the payments industry with a wealth of international experience.

#### Canada



Interac is Canada's leading payment brand. Together, Interac Association and Acxsys Corporation operate an economical, world-class debit system with broad-based acceptance, 24/7 reliability, security and efficiency. The brand is chosen an average of 12 million times daily to pay and exchange money..



### Mark O'Connell President and CEO, Interac Association

Mark is responsible for a suite of trusted payment products offered across the physical and online spaces and for leading the development of new and innovative payment products and fraud prevention solutions.

Mark has extensive experience in the payment card and banking technology industries.

Previously, he was Executive Vice President,
Finance Market at Emergis Inc.

#### **New Zealand**



Paymark

Paymark is New Zealand's leading provider of digital payments, loyalty and information services.

In 2015 Paymark carried 75% of all electronic payment transactions in New Zealand and processed over NZD\$55 billion in total value.



### Mark Rushworth Chief Executive Officer, Paymark Mark joined Paymark in December

Mark joined Paymark in December 2013. A seasoned executive with over 19 years' experience in the ICT industry, Mark has held senior positions with multi-national companies such as Vodafone,

Telecom NZ and ITV.

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