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# Overcoming Fragmentation – The Payments Platform Challenge



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## 1.1 Executive Summary

Global payment trends and digital technologies are driving change in many key payment markets. The omni-channel payment behaviour of increasingly online consumers, the multiple payment service demands of merchants, the globalisation of merchant businesses and technology driven fragmentation of payment services are real challenges for payment platform providers.

This report highlights the impact of payment fragmentation in the digital payments world seen in key payment markets around the world, through the lens of both merchant businesses and the payments industry.

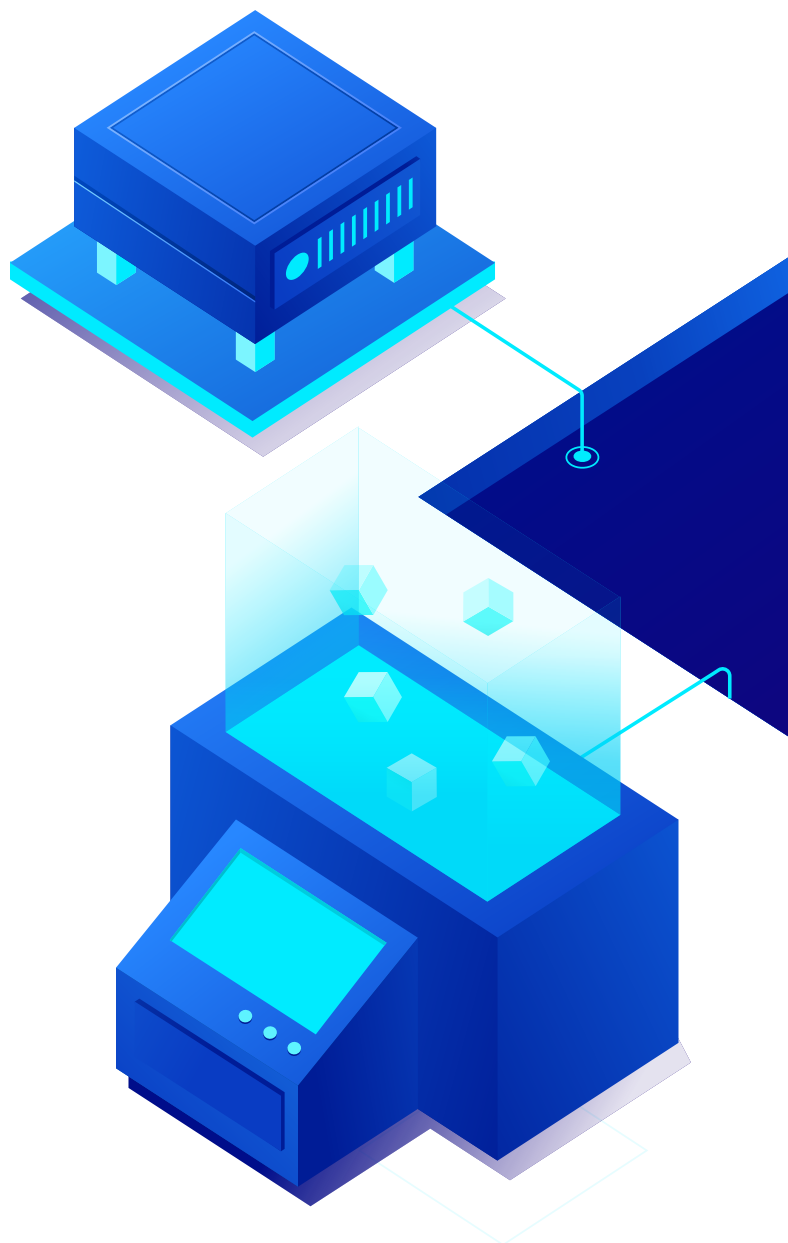
In today's world, global businesses are seeking a global solution that helps them consolidate their local business, grant them access to information in real-time and generate reports, ad-hoc, to make key decisions that help them manage cash flow, inventory and monitor their customer behaviour.

A key element of the report is for merchants, acquirers and payments industry players to understand what the current status of digital transformation and fragmentation is in key payment markets - and which payment services are preferred by local and global consumers. For this report, the payment markets of the USA and Canada were compared with selected Asia Pacific markets in order of payment market maturity.

The Key Message for the payments industry is - Have a clear digital strategy and overcome payment fragmentation with an Open Payment Platform to succeed in a rapidly changing environment.

### **Radi Abd El Haj**

CEO & Executive Director  
RS2



For a long time, payment services have been pretty straightforward, even the advent of online shopping did not make things more complicated as e-commerce payments were seen as a completely separate channel.

**However, the proliferation of payment channels and the fragmentation of payment services has made payment service processing increasingly complex, and the blurring of previously separate payment channels is only set to continue.**

Contactless, mobile apps and mobile payment devices are going to be increasingly the new normal for consumers, for merchants and the payments industry as they offer the potential for competitive differentiation.

One of the main drivers of omni-channel payments is mobile. In 2017, there were around 7.8 billion mobile connections, representing 5 billion unique subscribers worldwide, according to mobile industry trade body the GSMA. When tablets and smartphones are the device of choice for accessing the Internet – and are the only means a consumer has of getting online in some countries – this has a significant impact on the customer payment journey and increases mobile-enabled B2C commerce.

It is noted that mobile technologies and new payment behaviours of connected consumers have gained momentum first in the USA, Europe, China, and other so-called mature countries. However, the rollout of digital technologies applies to the MEA region, Asia-Pacific, and the Americas sooner rather than later.

The global card payment trends identified in key markets are set on one hand by the international and domestic card schemes and on the other hand by innovative bank groups and digitally-driven

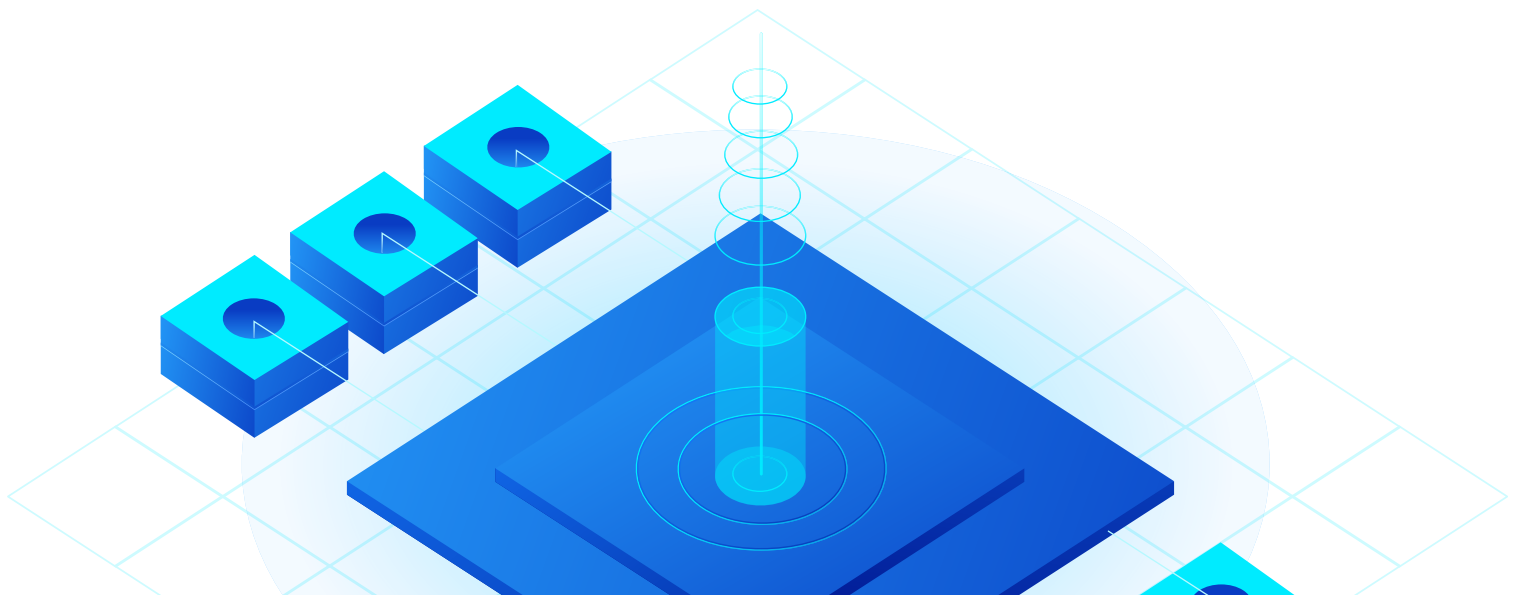
FinTechs who are the trendsetters for card-less payment services like IBAN-based bank payments, mobile bank payment apps, and online wallets.

According to research firm Forrester, purchases that consumers begin using a digital channel but do not complete online will reach €704 billion by 2020, up from €457 billion in 2015. Combined with online sales, these omni-channel sales are expected to reach €947 billion, or 53 percent of total European retail sales by 2020.

It is obvious that the digital payment ecosystem has become more complex and the globalisation of merchant businesses, combined with a fragmentation of payment services has gained momentum. A continued move to mobile-initiated payments has been identified in all payment markets, and there are increasing numbers of online connected consumers paying anywhere without a specific form-factor.

The take up varies by country and by region: there are particularities and idiosyncrasies everywhere, and the use of different payment types is as dependent on cultural norms and historical perspectives as it is on existing (or non-existing) infrastructure and attitudes to technology.

A key element for merchant businesses and payments industry players is to understand what is the current status of key payment markets in 2018 and which payment services are preferred by local consumers. For this report, the payment markets of the USA and Canada were compared with selected Asia Pacific markets in order of payment market maturity.





Led by Visa and MasterCard and followed by American Express, Diners/Discover, JCB and UnionPay, the rollout of advanced security features (e.g. tokenisation, 3D-Secure 2.0), new card payment form-factors (e.g. NFC, NFC stickers, wearables), and digital wallets (e.g. MasterPass, VISA Checkout, American Express Serve, PayPal, Amazon Pay) has started in the USA.

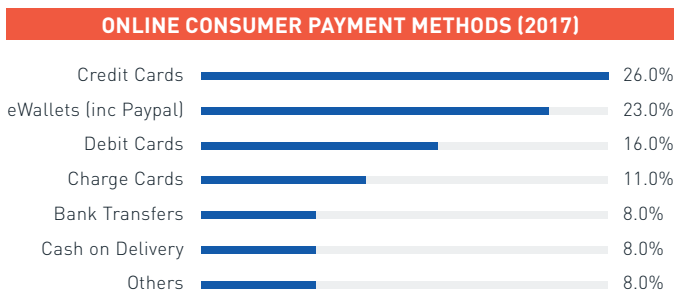
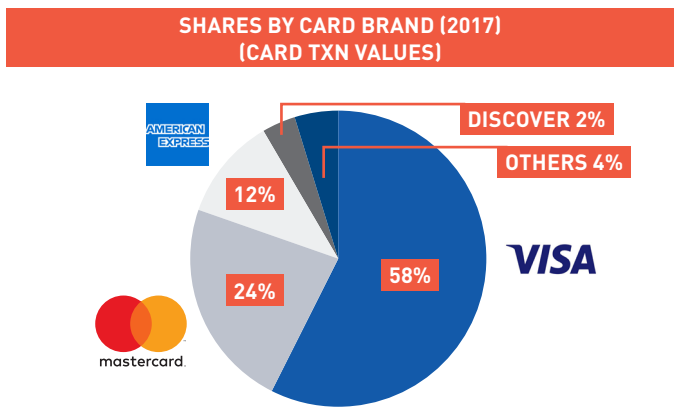
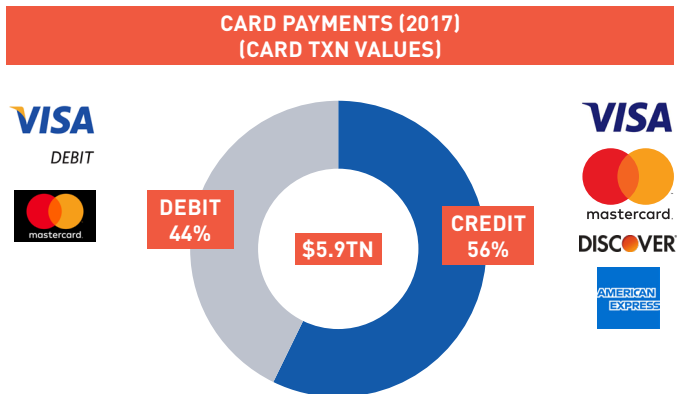
The payment business in the USA is driven by the card schemes and large FinTech players. However, the USA is a market of innovation - the home of PayPal, Apple Pay, Android Pay, Amazon Pay, and emerging WhatsApp Pay. The national central bank operates an immediate payment system.

By mid-2018, the specific payment characteristics in the US payment market include:

- Credit transfer is the dominating payment method by transactions value followed by direct debits and cheques.
- Card payments are the dominating cashless payment method by transaction number followed by cheques.
- Card payments are dominated by MasterCard and VISA followed by American Express and Discover.
- There is no domestic debit card brand. Most consumers prefer to use their credit card.
- The rollout of contactless EMV cards and mobile HCE NFC payments continues.
- Apple, Samsung, Google push their payments services ('Giant Pays') supported by many US banks.
- PayPal, and retailer Amazon push their own online wallets as alternative payment methods.
- The USA has the oldest and second largest e-commerce market in the world. In 2017, the e-commerce value was USD 0.74 trillion, thereof mobile USD 0.17 trillion (23%).

Figure 1 highlights the payment mix in the USA and documents the direction of payment fragmentation in the country.

(Figure 1: USA Market Context – Selected Macro Payments Data).



Note: merchants' view





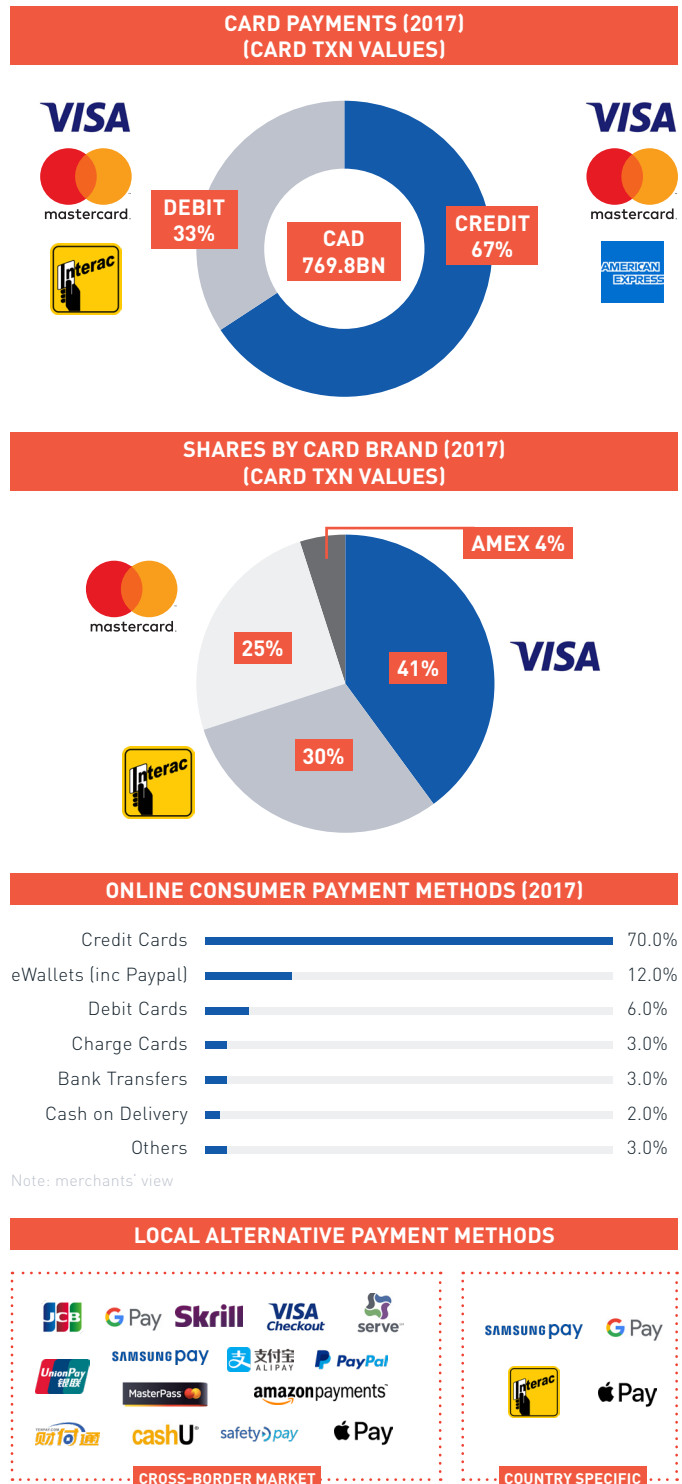
Different from the USA, the Canadian banks operate their own domestic payment scheme, Interac, which competes with the international card brands and the large FinTech players. Most interestingly, Interac combines cards for ATM/POS use with card-less bank transfers for online/mobile payments. In addition, an immediate payment system is live.

By mid-2018, the specific payment characteristics in the Canadian payment market include:

- Credit transfer is the dominating payment method by transactions value followed by cheques and direct debits.
- Card payments are the dominating cashless payment method by transaction number followed by credit transfers.
- Interac is the domestic debit card scheme cobadged MasterCard or VISA Debit for international use.
- Interac Online allows online buyers to pay for purchases by bank transfers directly from their bank account.
- Card payments are dominated by VISA, Interac and MasterCard followed by American Express.
- Most Canadian cards and POS terminals in Canada are contactless enabled.
- The Canadian banks support domestic Interac cards, Interac Online, Apple Pay, Samsung Pay and Google Pay.
- PayPal, and retailer Amazon push their own online wallets as alternative payment methods.
- In 2017, the e-commerce value in Canada was USD 45 billion, thereof mobile USD 9 billion (20%).

Figure 2 highlights the payment mix in Canada and documents the direction of payment fragmentation in the country.

(Figure 2: Canada Market Context – Selected Macro Payments Data).





Australia has a clear digital payments strategy. Australia recently launched its New Payments Platform (NPP) that offers instant payments across the country. From 2014, the Australian banks rolled out the new domestic card scheme, EFTPOS, that combines cards for ATM/POS use with online/mobile payments directly from the bank card account. The Australian Open Banking Initiative is coming into effect in July 2019 combined with the Consumer Data Right directive (CDR). In 2018, 1 in 3 Australians said they are willing to allow banks to share their data.

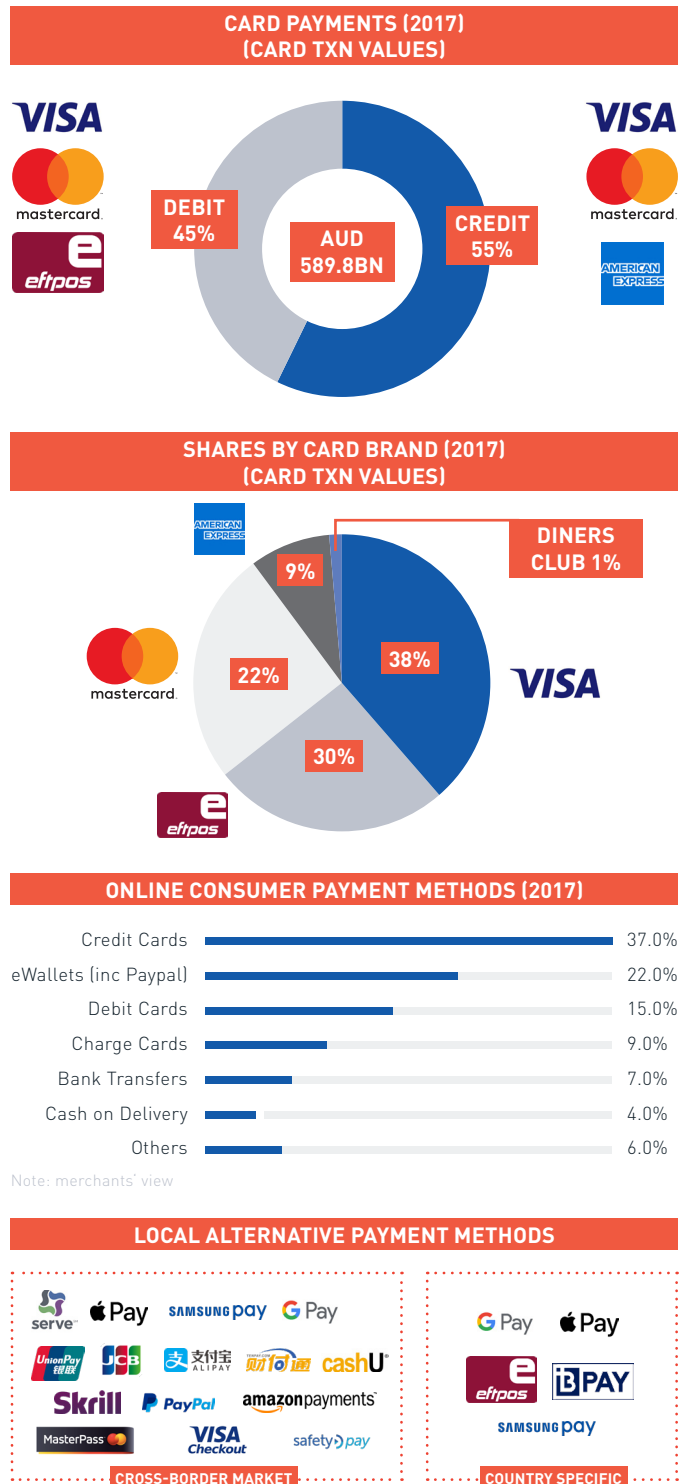
By mid-2018, the specific payment characteristics in the Australian payment market include:

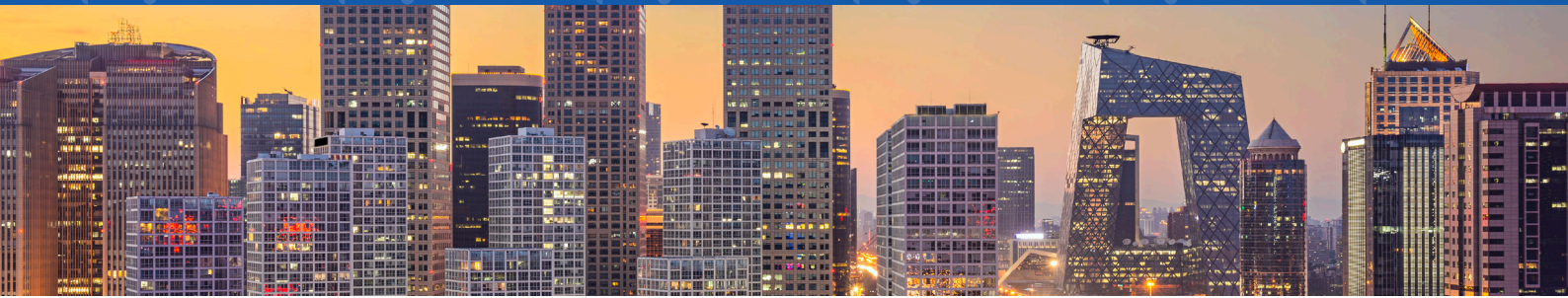
- Credit transfer is the dominating payment method by transactions value followed by direct debits.
- Card payments are the dominating cashless payment method by transaction number followed by credit transfers.
- EFTPOS is the domestic card scheme used in Australia and supports mobile payments, including Apple Pay and Google Pay. EFTPOS allows online buyers to pay for purchases directly from their bank card account.
- Card payments are dominated by VISA, EFTPOS and MasterCard followed by American Express and Diners Club.
- Most Australian cards and POS terminals in Australia are contactless capable.
- The Australian banks support domestic EFTPOS cards, the online bank payment methods POLI Payments and BPAY, the digital wallets VISA Checkout and MasterPass, and the 'Giant Pays'.
- PayPal, and retailer Amazon push their own online wallets as alternative payment methods.
- Increasing preference for alternative payment methods with credit cards are losing their share of domestic e-commerce.
- In 2017, the e-commerce value in Australia was USD 26 billion, thereof mobile USD 9 billion (34.6%).

Government agencies are about to implement the recommendations set out in the Farrell Report entitled "Review into Open Banking in Australia", supporting the creation of a new data-sharing regime in the financial services industry. The Australian Government is going to create a Consumer Data Right (CDR), which includes the establishment of the Open Banking framework. Following this announcement, the Australian Competition and Consumer Commission, in consultation with the Office of the Australian Information Commissioner, will develop draft rules for Open Banking while the creation of data and security standards will be developed by the Commonwealth Scientific and Industrial Research Organisation's Data61.

Figure 3 highlights the payment mix in Australia and documents the direction of payment fragmentation in the country.

(Figure 3: Australia Market Context – Selected Macro Payments Data).





**China has a clear digital payments strategy and operates its own card payment scheme, UnionPay. It is the market of innovation and the home of social apps with mobile payment wallets. Alipay, Tenpay, WeChat Pay and UnionPay cards dominate the Chinese payment market. Chinese consumers are global leaders in their use of digital mobile payments.**

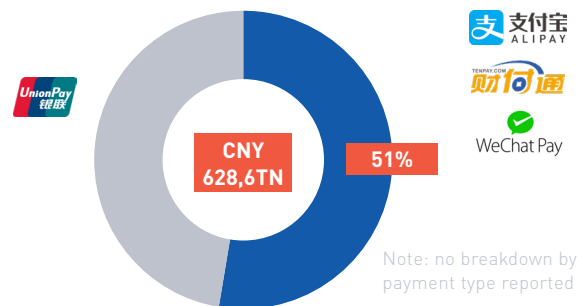
By mid-2018, the specific payment characteristics in the Chinese payment market include:

- Credit transfer is the dominating payment method by transaction value followed by card/e-money payments.
- Card/e-money payments are the dominating cashless payment method by transaction number followed by credit transfers.
- UnionPay is the domestic card scheme used in China which competes on a global level with the international card brands and the large FinTech players. UnionPay is expanding into CIS countries, the UK and the USA.
- Card payments are dominated by UnionPay cards. There are only a very few payments on MasterCard and VISA cards in China.
- Rollout of contactless cards and contactless POS terminals continues.
- The Chinese banks support UnionPay cards and the payment apps Alipay, WeChat Pay and TenPay. Cross-border payment services play a niche role.
- The online wallets Alipay, WeChat Pay and TenPay have more than 50 percent share of the Chinese payments market due to a combination of product functionality, user experience and timing. They were introduced when mobile adoption and consumer spending were both booming.
- UnionPay has signed a QR code payment partnership with WeChat Pay and Alipay, which forms part of a global trend to combine cards with mobile payment service providers.
- The China has the largest e-commerce market in the world. In 2017, the e-commerce value was USD 1.03 trillion, thereof mobile USD 0.45 trillion (43.7%).

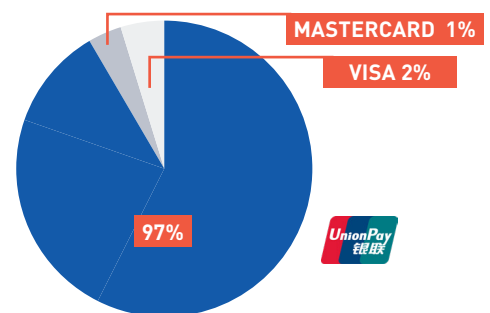
Figure 4 highlights the payment mix in China and documents the direction of payment fragmentation in the country.

(Figure 4: China Market Context – Selected Macro Payments Data).

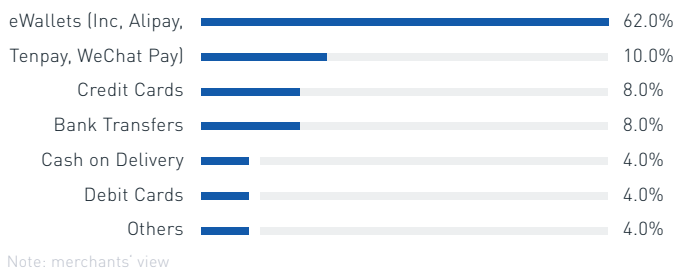
### CARD PAYMENTS (2017) (CARD TXN VALUES)



### SHARES BY CARD BRAND (2017) (CARD TXN VALUES)



### ONLINE CONSUMER PAYMENT METHODS (2017)



### LOCAL ALTERNATIVE PAYMENT METHODS





Singapore has a clear digital payments strategy and operates its own domestic payment scheme, NETS, which competes with the international card brands and the large FinTech players. In addition, Singapore operates an immediate payment service, and it claims to be one of the global FinTech innovation hubs in the digital banking space.

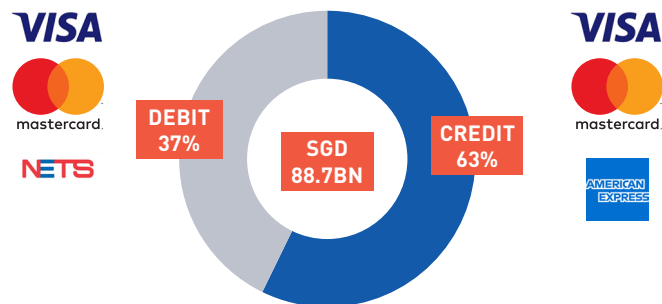
By mid-2018, the specific payment characteristics in the Singapore payment market include:

- Credit transfer is the dominating payment method by transaction value followed by cheques and direct debits.
- E-money payments are the dominating cashless payment method by transaction number followed by cards.
- NETS is the domestic payment scheme used in Singapore and, among others, supports bank payments at merchant outlets (NETS) and online (eNETS), mobile payments (NETSPay), card services (CashCard, FlashPay card), electronic funds transfer (FAST, Paynow, GIRO).
- Card payments are dominated by NETS, VISA and MasterCard followed by American Express and Diners Club.
- Most Singapore cards and POS terminals in Singapore are contactless enabled.
- The Singapore Quick Response Code (SGQR) combines multiple payment QR codes into a single label and aims to make QR code-based mobile payments simpler for both consumers and merchants. SGQR will be adopted by 27 payment schemes including PayNow, NETS, GrabPay, Liquid Pay, and Singtel Dash.
- The Singapore banks support NETS payments, the digital wallets VISA Checkout and MasterPass, and Apple Pay.
- PayPal, and retailer Amazon push their own online wallets as alternative payment methods.
- Singapore is the third largest e-commerce market in South-East Asia, despite a relatively small population. In 2017, the e-commerce value in Singapore was USD 5 billion, thereof mobile USD 2 billion (40%).
- Cross-border shopping is very popular, with more than half of online consumers buying from international merchants.

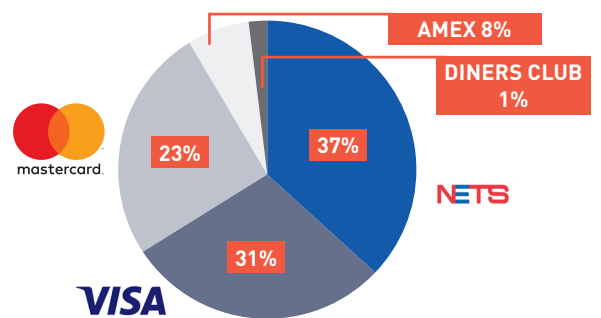
Figure 5 highlights the payment mix in Singapore and documents the direction of payment fragmentation in the country.

(Figure 5: Singapore Market Context – Selected Macro Payments Data).

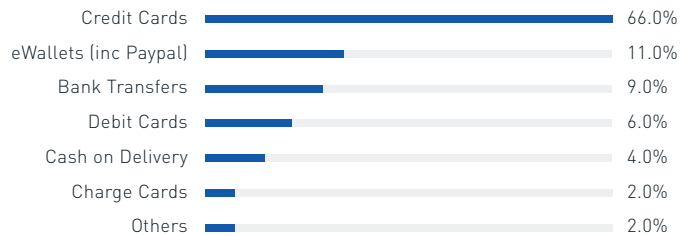
### CARD PAYMENTS (2017) (CARD TXN VALUES)



### SHARES BY CARD BRAND (2017) (CARD TXN VALUES)



### ONLINE CONSUMER PAYMENT METHODS (2017)



Note: merchants' view

### LOCAL ALTERNATIVE PAYMENT METHODS





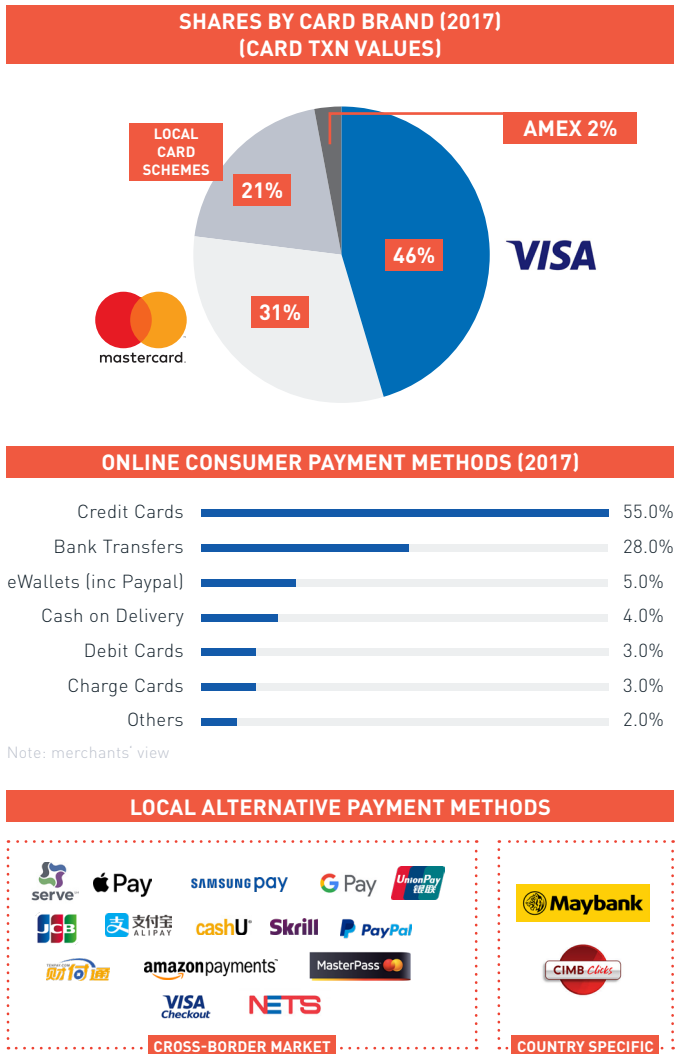
In late 2016, the Malaysian government launched the National e-commerce Strategic Roadmap and plans to launch an Open API set on country level. Local card schemes and bank transfers compete with the international card brands and the large FinTech players. Malaysian consumers are believed to be adopting mobile payments rapidly.

By mid-2018, the specific payment characteristics in the Malaysian payment market include:

- Credit transfer is the dominating payment method by transaction value followed by direct debits.
- Card payments are the dominating cashless payment method by transaction number followed by credit transfers.
- Card payments are dominated by VISA and MasterCard followed by American Express and Diners Club.
- The rollout of contactless cards and POS terminals in Malaysia continues.
- The Malaysian banks support local card schemes, credit cards, GrabPay and mobile bank payment apps.
- M-commerce is a growing trend. Smartphones are used by 89% of internet users to access the internet.
- In 2017, the e-commerce value in Malaysia was USD 2 billion, thereof mobile USD 1 billion (50%).
- WeChat (CHN) has launched its digital payments service, WeChat Pay, in Malaysia, marking its first product to be released in Asia outside of China and Hong Kong. It has more than 20 million active WeChat users in Malaysia.

Figure 6 highlights the payment mix in Malaysia and documents the direction of payment fragmentation in the country.

(Figure 6: Malaysia Market Context – Selected Macro Payments Data).





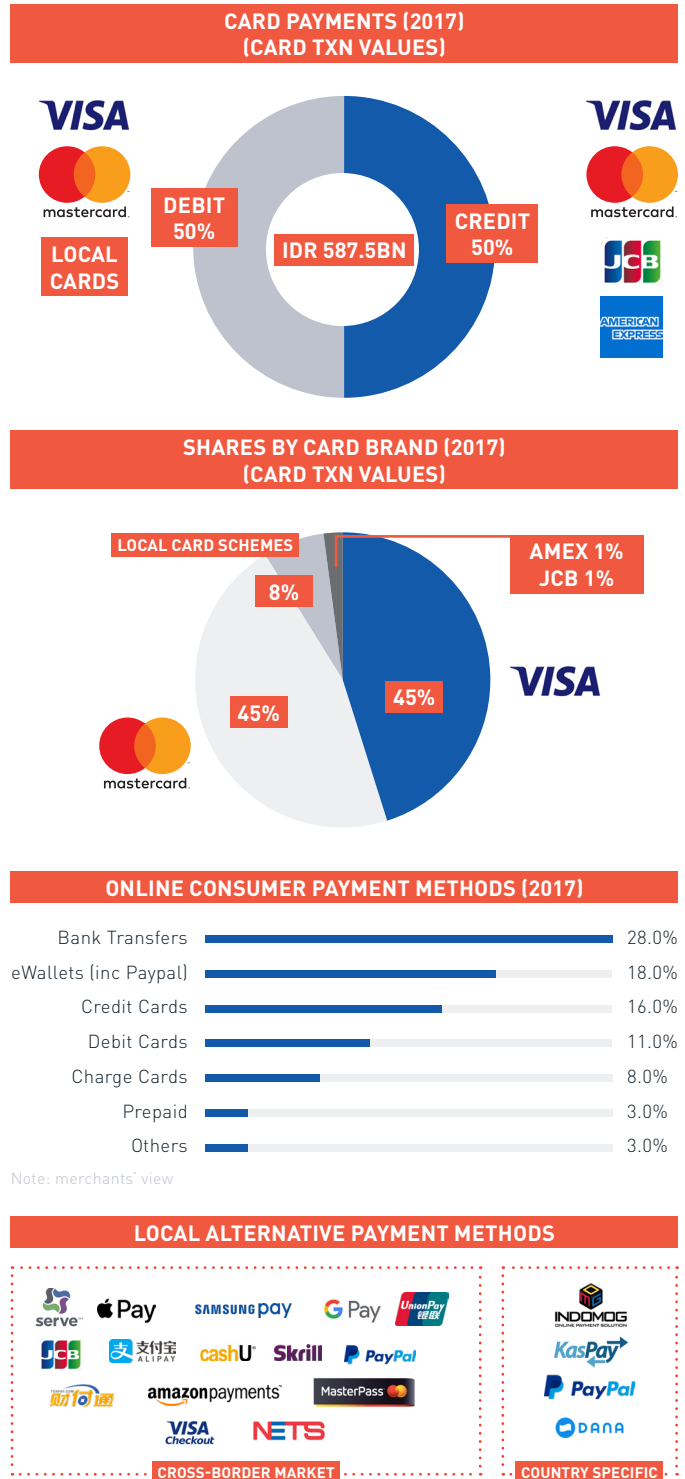
The Indonesian government changed regulations to open the market to foreign investment, which should lead to strong payment business expansion, among others. Local card schemes and bank transfers compete with the international card brands and the large FinTech players in this emerging market.

By mid-2018, the specific payment characteristics in the Indonesian payment market include:

- Credit transfer is the dominating payment method by transaction value followed by direct debits.
- Card payments are the dominating cashless payment method by transaction number followed by credit transfers.
- Card payments are dominated by VISA and MasterCard followed by local card schemes, American Express and JCB.
- The rollout of contactless cards and POS terminals in Indonesia continues.
- The Indonesian banks support local card schemes, credit cards and mobile bank payment apps.
- Bank transfer are popular payment methods for online shopping, including INDOMOG and KasPay.
- In 2017, the e-commerce value in Indonesia was USD 11 billion, thereof mobile USD 5 billion (45.4%).

Figure 7 highlights the payment mix in Indonesia and documents the direction of payment fragmentation in the country.

(Figure 7: Indonesia Market Context – Selected Macro Payments Data).





**In this emerging market, cards and cash-on-delivery for online purchases are the payment method of choice for consumers. Local card schemes and bank transfers compete with the international card brands and the large FinTech players.**

The Philippines has one of the highest percentages of people in Southeast Asia who do not have a bank account (86%) and who transact in cash (98%). A still underdeveloped infrastructure for delivery is currently making it difficult for merchants to deliver a good end-to-end consumer experience.

By mid-2018, the specific payment characteristics in the Philippine payment market include:

- Credit transfer is the dominating payment method by transaction value followed by direct debits.
- Card payments are the dominating cashless payment method by transaction number followed by credit transfers.
- Card payments are dominated by Mastercard, VISA and local card schemes followed by American Express and JCB.
- The rollout of contactless cards and POS terminals in the Philippines continues. PesoPay is the leading online payment gateway in the Philippines.
- The Philippine banks support local card schemes, credit cards, online wallets and mobile bank payment apps.
- In April 2018, The Philippine national central bank launched InstaPay, the latest automated clearing house (ACH) under the National Retail Payment System (NRPS) Framework. Individuals, businesses, and government institutions will be able to send and receive funds or make payments in real time of up to PHP 50,000 per transaction, without limit, in a day.
- Grab, the Philippines' and Southeast Asia's leading Online-to-Offline (O2O) platform, is going to roll-out its GrabPay mobile wallet in the Philippines.
- With a low but growing population of smartphone owners, mobile shopping and in-store checkout experiences will be on the forefront of digital commerce development in the future.
- In 2017, the e-commerce value in Philippines was USD 3 billion, thereof mobile USD 1 billion (33.3%).

(Figure 8: Philippines Market Context – Selected Macro Payments Data).

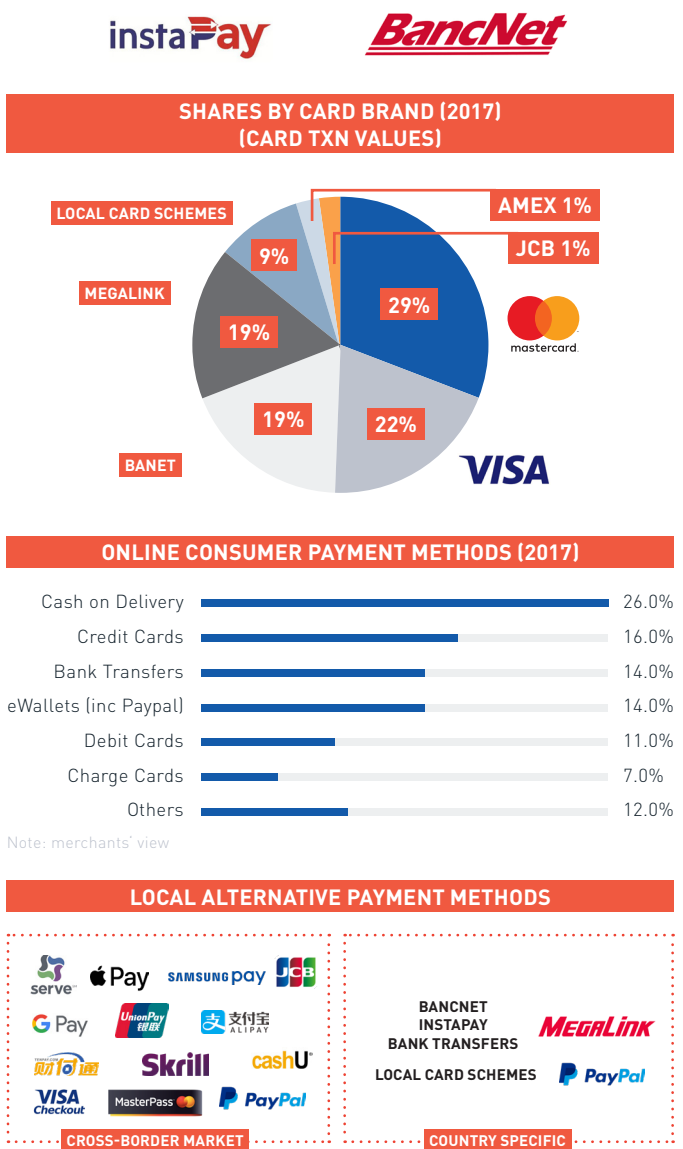


Figure 8 highlights the payment mix in the Philippines and documents the direction of payment fragmentation in the country.

Omni-channel demands and changing consumer behaviour are pushing the globalisation of merchant businesses, and new payment services are making the market place more complex rather than less.

**The proliferation of payment channels and the fragmentation of payment services has made payment processing increasingly complex, and the blurring of previously separate payment channels is only set to continue.**

Thanks to mobile technology, omni-channel is a key issue in all payment markets: consumers shop in retailer outlets, purchase in online shops and via apps, they Click&Collect with delivery at POS outlets where it is supported, and they also use their mobiles to shop in-store.

This demand for convenience is reshaping the retail sector. Retailers try to offer a seamless omni-channel shopping experience for their customers with the latest POS technologies such as self-service checkouts, contactless payments, and combining omni-channel shopping with mobile apps and alternative payments – but this landscape is often beyond their comprehension and ability to deliver.

Generally speaking, the global trends of digitalization of payments and disruptive technologies can be found in all payment markets analysed for this report and many others, but they have a different level of maturity and roll-out. In most instances one strong theme is that there are two clear characteristics when defining the competitive landscape, cross border, multi-jurisdictional payment instruments and domestic or local payment methods.

From a technology perspective, the following emerging trends were identified in the more mature payment markets:

- Digital card form-factors, omni-channel payment service demands, in-app payments, mobile in-store payments
- Invisible payments, conversational commerce, in-car payments
- Card-less payments, IBAN-based payments, immediate payments in real-time

### Card Payments

Card payments do play a significant role in all of the payment markets analysed in this report:

- In all of the payment markets, international card brands are issued and accepted by many merchants.
- Domestic card schemes dominate - Canada: Interac, Australia: EFTPOS, China: UnionPay, Singapore: NETS.
- There are no domestic card schemes in the USA, Malaysia, Indonesia and the Philippines.
- However, local mono-bank cards still play a minor role in Malaysia, Indonesia and the Philippines.
- The rollout of contactless cards and POS terminals continues in all payment markets. In addition, there are mobile HCE NFC payment services, NFC stickers and other contactless wearables piloted.
- The digital wallet MasterPass has launched in the USA, Canada, Australia, China and Singapore.
- The digital wallet VISA Checkout has launched in the USA, Canada, Australia, China, Singapore and Malaysia.
- So far, Apple Pay, Google Pay and Samsung Pay have launched in the USA, Canada, Australia and Singapore.
- In China, UnionPay cards dominate in competition with online wallet apps like Alipay and WeChat Pay.

It can be clearly stated that card payments and card technologies push the globalization of merchant businesses even in emerging countries like Malaysia, Indonesia and the Philippines. However, that is not the complete message from the payment markets reviewed.

### Alternative Payments – Online Wallets and Mobile Bank Payment Apps

Alternative payment methods such as mobile wallets and mobile banking apps are steadily displacing traditional payment methods such as cards and cash/cheques in the Asia Pacific e-commerce market.

The alternative payments market is driven by PayPal and innovative banks that have a clear digital strategy:

- In all payment Markets, international FinTech players as well as the likes PayPal and Amazon have launched online wallets for both online payments and in-store payments. PayPal has a more or less major market share of the total online payments.



- Apple Pay, Google Pay and Samsung Pay enable PayPal users to pay for purchases from their PayPal account. However, this cooperation is restricted to cards linked to the user's PayPal account, e.g. a Debit MasterCard card.
- Bridging technologies for in-store payments with wallets used include NFC, QR-codes and Bluetooth Low Energy (BLE).
- In China, the online wallets Alipay, WeChat Pay and TenPay have more than 50 percent share of the Chinese payments market due to a combination of product functionality, user experience and timing.
- In all payment markets, innovative banks are in favour of Open Banking services in combination with their mobile banking apps. Competing with cards and FinTechs, the banking industry enables mobile banking app-initiated IBAN-based payments direct from the bank account.

Mobile wallet adoption in the Asia Pacific markets like China, India, Taiwan, Singapore and Australia is much higher than in Western countries such as the US, Canada and Europe despite widespread smartphone and tablet adoption.

This is because card payments and POS terminals are so familiar and common for Western consumers that there is no real reason or urgency to adopt mobile payments.

QR-code payments directly from the bank account, which avoid the higher charges associated with card payments and remove the need to setup POS terminals, have come to dominate in Asia Pacific. The low cost of accepting these payments and the high consumer penetration of wallets such as Alipay, WeChat Pay and Paytm in India have driven merchants to increasingly adopt this form of payment instead of only investing in card acceptance devices.

In addition, the merchant service fee on QR-code payments directly from bank accounts is reported to be much lower than the average Merchant Service Charge (MSC) on credit cards. This is going to have a strong impact on merchants and the payments industry in the emerging countries Malaysia, Indonesia and Philippines.

Asia-Pacific is leading the race in encouraging its population to become a completely cashless society, with consumers in the Philippines (27%) and China (25%) in particular using alternative payments to pay for their everyday purchases.

According to the GlobalData 2018 Q3 global consumer survey, APAC countries such as the Philippines and China account two-fold greater in terms of consumers showing preference towards stores with advanced in-store payments, in comparison to the global average of 12 percent.

With e-commerce being the key to Asia Pacific's modern way of shopping, giant e-commerce platforms like Alibaba are making the shopping experience more convenient by encouraging mobile and online payments, luring in digitally savvy and time-pressed consumers.

Mobile apps combined with payments – such as WeChat Pay, AliPay and new WhatsApp Pay – are believed to be quickly embraced by digitally connected consumers for their convenience.

### Digital Payment Strategies – a USP for competitiveness

Comparing the payment markets reviewed for this report, there is a significantly important aspect as a milestone for a competitive domestic payment ecosystem, a clear digital payments strategy on a country level:

- In the USA so far, the US banks follow the digital payment strategy of the larger international payment schemes. However, an Open Banking approach with immediate payments and mobile bank payment apps direct from the bank account is the next logical step.
- The countries with a clear digital payment strategy include Canada, Australia, China and Singapore. The banking industry in these countries have embraced combining domestic card schemes with mobile bank payments directly from the user account for online/mobile payment of purchases.
- The Australian regulator announced an Open Banking Initiative regulation effective from July 2019, which goes far beyond the European model of the revised Payment Services Directive, PSD2.
- In emerging countries like Malaysia, Indonesia and the Philippines, the regulators first need to open the legal framework for digital payments and Open Banking. In a second step, these countries will follow the trail of Australia and will implement their own digital payment strategy, including immediate payment systems.

In summary, the fragmentation of payment services can be identified in all payment markets reviewed. By end-2018, it can be stated that both the global and local payment markets are changing, and that new digital requirements for payment platform solutions are mandatory to overcome the fragmentation in the digital payment world.

The payments industry, the banking industry, payment service acquirers, processors and the global merchant businesses all need to adopt a clear digital strategy to succeed in both global and local payment markets.

It is obvious that the digital payment ecosystem has become more complex, with the globalisation of merchant businesses and the fragmentation of payment services being the overarching themes that both parties, as industries, need to collaborate on to solve. A continued move to mobile-initiated payments is identified in all payment markets and, even more so is the connected consumer who expects to pay anywhere without a specific form-factor.

### **By mid-2018, the digital payments world is composed of the card payment ecosystem, which is in a significant digitalisation process, advanced payments, and the emerging card-less Open Banking payment ecosystem.**

The change is driven by disruptive technologies, omnichannel demands of mobile connected consumers, the globalisation of merchant businesses, and by mobile bank payments in-store demands.

The trends identified are driven by the international and domestic card schemes and innovative bank groups as well as digitally-driven FinTechs which set the trend for card-less payment services like IBAN-based bank payments and online wallets.

The digital payments world characteristics and its competitive fragmentation highlighted in this section mirrors with the trends that were identified in the payment markets for this report.

### **The Payment Infrastructure demanded by Merchants**

In the last decade, innovations have started to change the retailer payment infrastructure demanded by merchants, and key amongst these are:

- Advanced payment security standards of the international card schemes:
  - o EMV, PCI PTS 5.0, P2PE security, 3D-Secure 2.0, Tokenisation security combined with HCE NFC.
- Market proven bridging technologies connecting payment services with any payment checkout type:
  - o Contactless, HCE NFC, 1D-barcodes, QR-codes, Bluetooth Low Energy (BLE).
- Most payment accepting POS terminal devices installed and in-store tablet solutions are now contactless enabled:
  - o Stand-alone MPOS terminals for SME solutions.
  - o In-store retailing tablet solutions with integrated PIN-Pad and contactless card reader.

- Mobile HCE NFC payments with card credentials stored in the cloud are accepted at contactless POS terminals.
- Connected mobile devices allowing consumers to shop at outlets, in-store, in-app and in online shops, thus enabling consumer journeys that start in one channel and are completed or fulfilled using another.
- Retail staff using tablets and retailer apps, combined with MPOS terminals to service consumers in-store.
- Small and mobile merchants replacing ECR devices and POS terminals with tablet solutions and MPOS terminals.
- Omni-channel support of multiple payment services, including cards, card-less bank payments and online wallets

Global merchant businesses and local merchants are believed to make different choices regarding the digital payment services they want to accept on an individual country level.

For obvious reasons, merchants in Asia Pacific have embraced card-less mobile wallet services, while European and American merchants are used to accepting (domestic) card payments. However, merchants in all regions report that they would like to benefit from card-less bank payments in-store and online wallet payments.

### **The Consumer View is Omni-channel**

Digital natives and connected consumers embraced mobile devices. They intend to purchase cross-border and omni-channel. In addition, they want to benefit from new types of payment use cases, e.g.

- POS payments with contactless cards, wearables and other contactless card-form factors.
- In-store payments with mobile devices:
  - o Mobile HCE NFC payments on cards, either direct or through digital wallets (MasterPass, Visa Checkout, "The Pays", PayPal, Amazon).
  - o IBAN-based in-app payments directly from bank accounts (e.g. initiated by HCE NFC or QR-code).
  - o Payments with messenger apps (e.g. Alipay, WeChat App) initiated by QR-code.

- o Cash-out in-store on cards or by banking app directly from bank accounts.
- Online payments on cards, from bank accounts, via wallets or using messenger apps (e.g. Alipay, WeChat App):
- o One-click checkout with automatic, invisible payments.
- o Click&Collect in-app payments with scheduled delivery in outlets.

Contactless, mobile apps and mobile payment devices are going to be increasingly the new normal for consumers. For the merchants and for the payments industry, they offer the potential for competitive differentiation.

### Card Payment Dynamics

Driven by consumers, retailer demands and mobile technologies, both the international card schemes and the domestic card schemes are trying to become increasingly dynamic and push for the digitalisation of card payments. The intention of all card payment service providers is to enable payment services across all channels and new digital checkout types.

The international card schemes – Visa, MasterCard, American Express, Discover/Diners, JCB and UnionPay – provide rules and regulation for contactless cards, card form-factors like wearables, digital scheme wallets and mobile HCE NFC payments on cards.

In order to prevent card fraud losses of scheme member banks, the international card schemes have introduced new levels of card security standards for online card payments on top of EMV and PCI standards. With 3D-Secure 2.0, online card payments become more secure by using one-time tokens as strong two-factor customer authentication. In parallel to PIN authentication, the scheme rules enable the launch of dynamic card security codes (DCSC) and biometric fingerprint authentication of card payments.

The scheme initiatives for digitalisation of payments continue with the launch of digital wallets combined with EMV tokenization security and card credentials in the cloud. Mobile HCE NFC payments on digital wallets in-store at retail outlets are seen as next logical steps. Tokenization security use combined with HCE NFC includes:

- MasterCard MasterPass, Visa Checkout, American Express Serve.
- “The Pays”: Apple Pay, Google Pay, Samsung Pay, PayPal, and individual HCE NFC banking apps.

Recent activities of MasterCard and Visa include a streamlining of card payment brands. Driven by interchange fee regulation in Europe and other countries worldwide, MasterCard scheme member banks have replaced Maestro cards with Debit MasterCard cards. In parallel, Visa scheme member banks replace Electron cards with Visa Debit cards.

Led by Visa and MasterCard and followed by American Express, Diners/Discover, JCB and UnionPay, the rollout of advanced security features and new card payment services started in the USA and is in a business-driven rollout process to other countries in Europe, the Americas, Asia Pacific and the MEA region.

The domestic card schemes follow the trail of the international card schemes in their home markets. Many of them have their roots in debit cards, but most also issue credit cards and prepaid cards. All domestic card schemes follow the EMV and PCI standards. The local member banks now issue contactless cards, and some are trialling mobile HCE NFC payments. Also, some domestic payment schemes trial 1D-barcode/QR-code initiated payments with their cards at retail cashier systems.

However, the domestic card schemes consider the opportunities and impact of card-less payments for online/mobile payments. This trend can be seen in Canada (Interac), Australia (EFTPOS), and Singapore (NETS). Even in China, the card scheme UnionPay cooperates with Alipay and WeChat Pay.

Example: Belgium’s domestic card scheme merged with the mobile payment app, Payconiq, supported by a host of Belgian and Dutch banks. The merger with Bancontact is part of a bold move by the Dutch/Belgian banks to create a multi-functional pan-European mobile wallet capable of initiating payments online, on the high street and from peer-to-peer (P2P) via a direct connection with the customers payment account at one of the participating banks.

### Advanced Payments and Card-less Bank Payments

To date, cards have not only dominated POS payments, but in many markets, they have been the primary means of online payment. However, driven by new consumer demands, technology innovation and in the light of mobile bank payment apps and online wallets, the digital payment ecosystem is in a dramatic transformation process.

Card-less payment services for consumers can include credit transfers and direct debits. In many instances, these payment types are applied to specific use cases and checkout types only.

In addition, prepaid products, payment services on prepaid accounts and online wallets, along with independent payment service providers, compete with cards for market share and “Top of Wallet”. The leading online wallets in Asia Pacific include PayPal, Alipay, WeChat Pay, and WhatsApp Pay.

IBAN-based bank payments direct from bank accounts play an increasingly significant role in the B2C e-commerce space. Bridging technologies like NFC, 1D-barcodes, QR-codes or BLE (Bluetooth Low Energy) enable any card-less payment service to be accepted omni-channel at POS terminals and all other checkout types.

**Bank Payment Apps** – One significant impact of the emerging Open Banking payment ecosystem is mobile banking apps combined with payments direct from the account. Furthermore, bank clients can use an additional app function to get account and payment information across-banks. It is very likely that consumers are going to embrace the new Open Banking services and would like to use mobile payments while shopping.

Increasingly consumers' mobile devices are going to become a dashboard that enables Open Banking, omni-channel shopping and payments at the various digital checkout types offered by modern retailers.

New in-app payments are demanded by digital banking clients. They include in-app payments on wallets, in-app payments direct from bank accounts, payment initiation enabled by payment initiation service providers (PISPs) or retailers, person-to-person mobile money transfers, contactless bank payments in-store via either NFC, 1D-barcodes or QR-codes, invoice payments in outlets and cash-advances in retail outlets ("cash-in-store"). The new challenge for the payments industry is how to enable in-app bank payments at all checkout types of modern retailers.

**Open Banking Initiatives** – In lots of countries that have a digital economy strategy, the national central banks and domestic regulators have prepared the ground for a digital economy without barriers, to drive the digital payments transformation and to implement an Open Banking regime. Thus, some countries are in the process of creating a unique legal framework for cash-less B2C and B2B payments and bank payment services that supersede pre-existing national legislation.

The most important intention of such Open Banking initiatives is to allow trusted payment providers (TPPs) access to bank accounts and payment data of bank clients, if and only if, the individual bank client grants explicit permission to do so. In addition, the regulators encourage the use of Open API sets to connect TPPs with banks.

This regulatory action is in line with technology innovation and de facto competition between bank and new types of FinTechs. For a decade, digital banks, mobile banks and TPPs have offered IBAN-based bank payment services to compete with traditional banks. Apart from agreed partnerships, banks have seen the access to accounts as unfriendly or illegal. To the contrary, FinTechs have claimed the right to access account information and payment data of bank clients for cross-bank services.

With the implementation of an Open Banking regime, the existing gap for banking services initiated by third parties would be legally bridged. Furthermore, Open APIs will allow banks to partner with trusted FinTechs of their choice to offer a new type of digital banking experience, including additional non-bank apps with value-added services.

**(Figure 9: The Consumer's mobile devices enable shopping at new Retail Checkout Types – Outlook)**



Source: PCM Research.

## Immediate Payments – Wanted Now

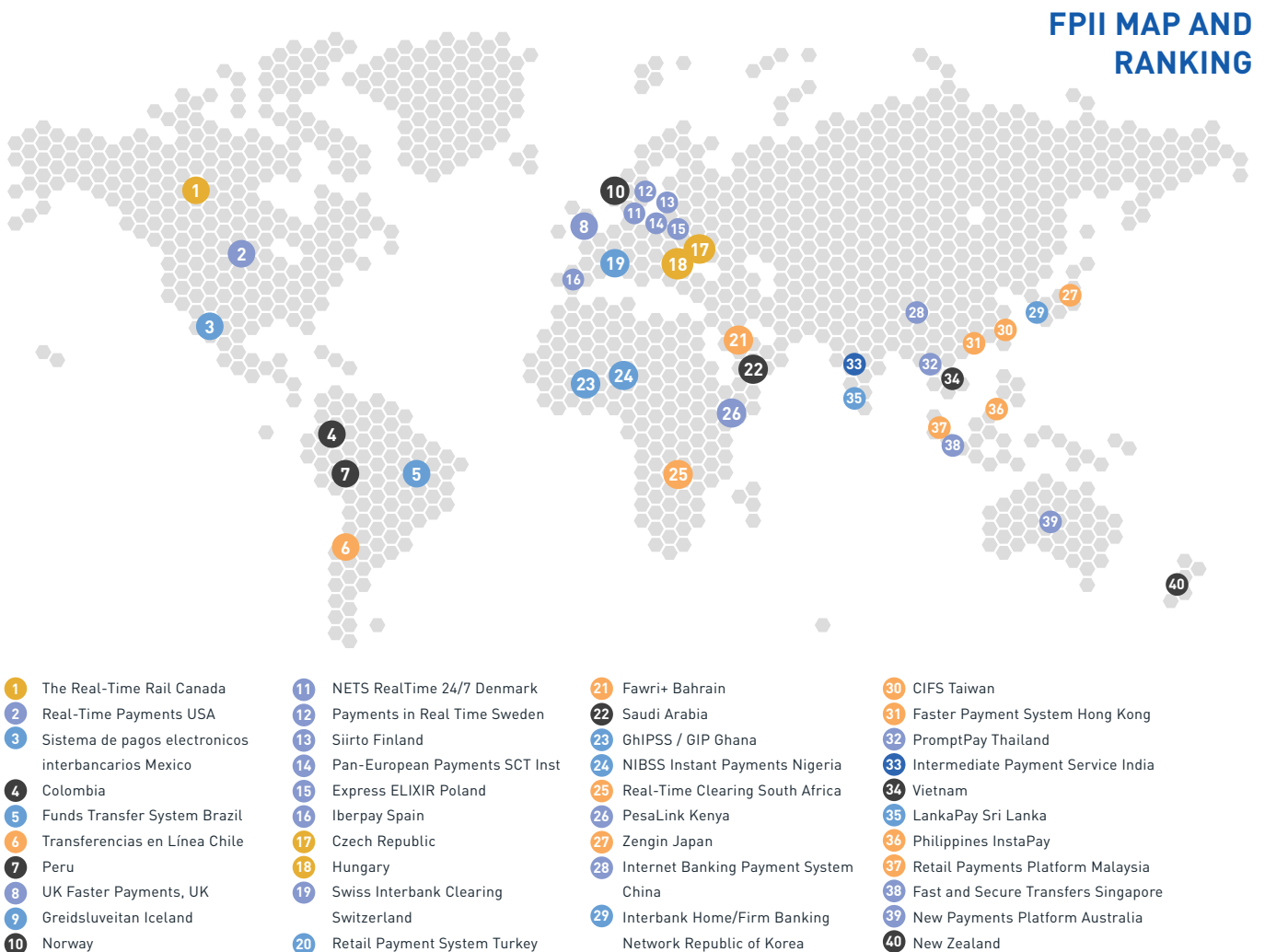
From end-2017, immediate payment services (e.g. Faster Payments UK, Instant Payments in Europe) are new card-less payment services relevant for merchants. And yet, it is not only the veterans like the United Kingdom, Switzerland or Singapore that are moving to add new immediate payment functionalities.

As of late 2017, more countries and regions are offering immediate payment services, including the European Banking Association Real-Time 1 (EBA RT1), SEPA Instant Payments (SCT-INST), The Clearing House (TCH) Real-Time Payments (RTP) System, Zelle Network, and the Australian New Payments Platform (NPP).

Thanks to a unique legal framework for payment services on country level, the rollout of card-less IBAN-based bank payment services goes hand-in-hand with the global rollout of mobile banking apps.

The business-driven rollout of immediate bank payments is part of the digital strategy of Canada, Australia, Singapore and other Asia Pacific countries like Malaysia, Indonesia and the Philippines, especially in those countries where bank payments last for more than D+1 (meaning that payments take one day to arrive from the point they are sent. Very often if the Sender misses a “cut off” time the payment can be D+2).

(Figure 10: Immediate Payment Systems Map – Outlook)



### SCORING

- Meets most features maximizing customer value
- Meets some features maximizing customer value
- Meets most features enhancing customer value
- Meets some features enhancing customer value
- Meets base required features only
- Under development
- On the radar

## Emerging Digital Payment Use Cases

Having in mind the afore-mentioned global trends, the dynamics of the card payment ecosystem and the emerging card-less Open Banking payment ecosystem, it is clear that these are the key challenges for the payments industry and their payment platforms.

In addition, new technology driven payment use cases will have a future impact on the payments industry, including messenger Pays (WhatsApp), Open Banking in-store, invisible payments, conversational commerce payments and in-car payments.

**Messenger Pays** – More and more consumers chat with businesses through messenger apps like Facebook Messenger, WhatsApp, Talk and WeChat. In addition, consumers may demand the use of added payment functions like WeChat Pay, Alipay, Google Pay. For example, The Chinese WeChat Pay enables payments via 1D-barcode initiated Quick Pay, QR-code payments, and in-app payments.

**Mobile Bank Payments in-store** – More and more banks combine mobile banking apps with payment functions like IBAN-based bank payments direct from the account. In other words, online banking comes to merchant outlets in-store. Bridging technologies include 1D-barcodes, QR-codes and NFC. It is noted that strong customer authentication remains part of the online banking service, e.g. mobile TANs.

**Invisible Payments** – The most cited examples that have removed the checkout and payment experience altogether are Uber and Amazon. At the end of an Uber journey, the passenger just gets out of the cab. There is no checkout and payment happens in the background. Similarly, at the Amazon Go store in Seattle, customers choose the items they want from the shelves. When they have finished, they leave. Amazon charges their online accounts and sends a receipt. The Amazon Dash button is a similar Click&Collect button with added invisible payment.

**Conversational Commerce Payments** – Conversational commerce refers to the intersection of digital assistants and consumers while shopping. Meaning, the trend toward interacting with online shops through digital assistants like Amazon's Alexa, Apple's Siri, Google Assistant and Microsoft's Cortana. In addition, consumers may configure their invisible payment means individually in the digital assistant app. The conversational verbal purchase process is then like: "Alexa, buy me a pepperoni pizza" with invisible payment and immediate home delivery.

**In-Car Payments** – is a new trend in the Internet of Things (IoT) world. The car industry invests in internet connectivity for cars. This enables drivers to purchase in-car from online shops and pay in-car. In-car payments can be Click&Collect payments, invisible payments or conversational commerce payments. In summary, the digital payments ecosystem, combined with the competitive fragmentation of payment services, is an opportunity for merchants and the payments industry to provide unique sets of payment service bundles and seamless shopping experiences for consumers. In mature countries like the USA, Canada, Europe, China, Australia and Singapore, the digital transformation has already started with emerging countries following the digitalisation trail.

By mid-2018, it can be stated that the payments industry, the banking industry, payment service acquirers, processors and global merchant businesses all need to adopt the new digital requirements for payment platform solutions to overcome the fragmentation in the digital payments world.

Indeed, the competitive fragmentation of multiple omni-channel digital payment services has significant impact on the existing payment platforms used in the payments industry.



Global payment trends and digital technologies are driving the change in the digital payment ecosystem. New card-less payment services like online wallets and IBAN-based bank are making the market place more complex.

**China is the best practice market for card-less omni-channel payments competing successfully with card payments. Mature payment markets like the USA, Canada, Australia and Singapore show a more or less clear digital strategy, which enables multiple digital payment service beyond cards. The fragmentation of payment services is a reality even in emerging payment markets like Malaysia, Indonesia and the Philippines.**

Further, the omni-channel behaviour and seamless payment expectations of consumers matches with modern merchants' demand for omni-channel payment service acceptance (see below).

In summary, payment fragmentation has significant impact on merchants, payment processing services and payment platforms. However, so far, many payment platforms and payments processors use separate payment solutions according to channel for POS outlets, online-shops and mobile apps and separate solutions for cards and for card-less payments. In brief, many legacy payment platforms are not prepared for the Digital Payment ecosystem:

- Separate mono-channel platform solutions for POS/online, cards and card-less payments.
- One payment platform for cards and another platform for online wallets or card-less bank payments, if these are even supported.
- One platform by country, no consolidation of platforms.
- Missing payment collection and payment clearing & settlement.
- Missing tokenisation security and missing state-of-the art security of payment credentials.
- Neither support for mobile bank payment apps, nor cash-in-store service, nor bank payments in-store.
- No optimization of payment cost, payment collection, payment clearing & settlement.

### Merchants' Views on Payment Platforms

Historically, merchants have operated and/or outsourced payment platforms separated by channel and by country, and many retailers use fragmented payment platforms by country for POS, e-commerce and mobile commerce channels.

While large retail groups may operate in-house solutions, small and medium sized merchants usually outsource payment service platforms to their supporting payments industry partners, e.g.:

- POS terminal network processors and POS terminal management to POS network service processors (NSPs).
- POS terminal maintenance services to POS terminal vendors or their local partners.
- The online payment service gateways for online shops are managed by Payment Service Providers (PSPs).

However, retailers experience threats from their existing card payment platforms that are mostly not built to support omni-channel and card-less payments. The historical split between e-commerce payments, POS payments and mobile in-store payments still remains strong with common problems for retailers being:

- Lack of new payment use cases and new payment services demanded by consumers.
- Acceptance of card-less payment services is limited to online channels.
- No way to accept the same payment services across all shopping channels and checkout types.

The impact of payment fragmentation on merchants is obvious: If merchants are supported by flexible payment systems they are able to react quite quickly. If not, then this will be costly for them to bring those changes onto their platform. Modern merchants say that they are going to embrace the digital payment ecosystem and that payment fragmentation would be the new normal for them. However, the worst-case scenario will be for them to not be able to support those changes because their payment platform can't manage it.

By mid-2018, omni-channel acceptance includes the ability to service all channels (i.e. POS/MPOS terminals, mobile in-store, online shops, in-app), and to accept multiple payment means in all of these channels. Multi-payment services demanded by merchants include cards, IBAN-based bank payments, online wallets, prepaid products, and immediate payments in real-time.

**The Key Message: Have a clear digital strategy and a digital payment ecosystem vision in mind, then payment fragmentation in the digital payment ecosystem is the new normal.**

The impact of fragmentation on payment platforms is crystal clear: a new kind of Open Payment platform solutions is required that combines the omni-channel merchant checkout types with multiple digital card payment services and with multiple card-less payment services like online wallets and mobile Open Banking payment services.

This fits with merchants' demand and consumer expectations of a seamless shopping experience. High-level, some key requirements for Open Payment platform solution include:

- Omni-channel payment processing, the new normal for omni-channel payments.
- Support multiple payment service fragmentation: cards, online wallets, IBAN-based bank payments.
- Support of contactless card form-factors and mobile app-based digital card payment services.
- Support of immediate payments and mobile banking app payments, Open APIs.
- Support of bridging technologies like NFC, HCE NFC, BLE, QR and mobile bank payment apps.
- Support of Digital Payment Journeys for consumers and merchants: onboarding, identity, authenticate, sign.
- Support of the latest security standards, KYC tools and state-of-the-art payment technologies.
- Support of Open APIs to connect to payment gateways, international card schemes, trusted payment providers and individual bank groups.

Across the value chain, merchants and payments industry entities need to invest in new technology as they adjust to shifting market conditions and consumer expectations. For many, these investments are necessary to respond to short-term changes, but in other cases, these decisions also form part of longer-term digital transformation plans. The decisions that are made in the coming years will lay the ground for the shape of future value chains and the businesses that participate in them.

Investments in payments technology and services have become mandatory. The need to support changing consumer payment preferences remains a major driver of change, particularly because of the increasing expectation that payment services will become a deeply embedded and a largely invisible part of the customer payment experience.

In short, the payments industry, the banking industry, payment service acquirers, processors and global merchants all need new Open Payment platforms to succeed in both the global and local payments markets.



In today's world global businesses are seeking a global solution that enables them to consolidate their local business, access information in real-time and generate reports ad hoc to make certain decisions that help them manage their cash flow, inventory and monitor their customers' behaviour.

The challenges that payment services acquirers and their supporting processors are usually facing include:

- License restrictions: in contrary to the European model where a license can be passported into other regions, in Asia Pacific or LATAM, a license is required for each country or jurisdiction, making it difficult for foreign acquirers to compete with well-established local ones.
- Applying for their own licenses is time consuming and costly. In EU they apply for one license and they can operate in all countries, whereas in Asia, as an example, they have to apply per country, and each application costs money and time to get. They also have to have a local operation there to support the business case along with back end admin.
- Transforming existing payment solutions by channel into omni-channel Open Payment service platforms.
- Combining global merchant business demands with the payment service requirements of local payment markets.
- Support of cards, card-less bank payments and in-store payments made with online banking apps.

The other option is to partner with local acquirers in the respective market to cover the licensing issues and manage the regulatory barriers. In order to achieve this, one single platform is required to fill these gaps.

However, this can only be one part of the strategy in the digital payment ecosystem. Independent from managing licensing and local payment services, there is a globalisation of merchants and cross-border payment services. This is one of the key findings from analysing selected payment markets in this report.

To succeed in a rapidly changing environment, the payments industry needs to invest in the foundations for digital payment service innovation. In parallel, merchants and supporting acquirers and payment processors face the challenge to implement Open Payment platforms, enabling them to provide seamless journeys for consumers.

### Open Payment Platforms – Overcoming Fragmentation

Global payment trends, digitalisation of cards, the Open Banking Payment ecosystem, mobile banking apps combined with payment functions, new checkout types and new payment use cases offer a completely different strategic direction and opportunity for large

merchants and for innovative small merchants. It is crucially important for merchants to connect with the Open Banking payment ecosystem, and it is an opportunity for large retailers and SME merchants in a rapidly changing payment environment. In analogy of the buzzword "Open Banking Ecosystem", the merchants' requirements for a modern omni-channel platform supporting multiple payment services can be summarized with the buzzword "Open Payment Platform".

In the light of omni-channel retailing strategies and global payment trends, modern merchants innovate their checkouts in order to support any payment means from any channel and add new payment means, e.g. immediate payments and mobile banking payments. In addition, leading retailers say they need a strong omni-channel payment acceptance strategy to succeed.

According to recurring annual talks with retailers, integration of POS terminals, mobile POS terminals and payment pages of online shops in one Open Payment Platform, connecting multiple payment services demanded by consumers with multiple-checkout types, across all channels is vital for retailers - and one of their most significant challenges.

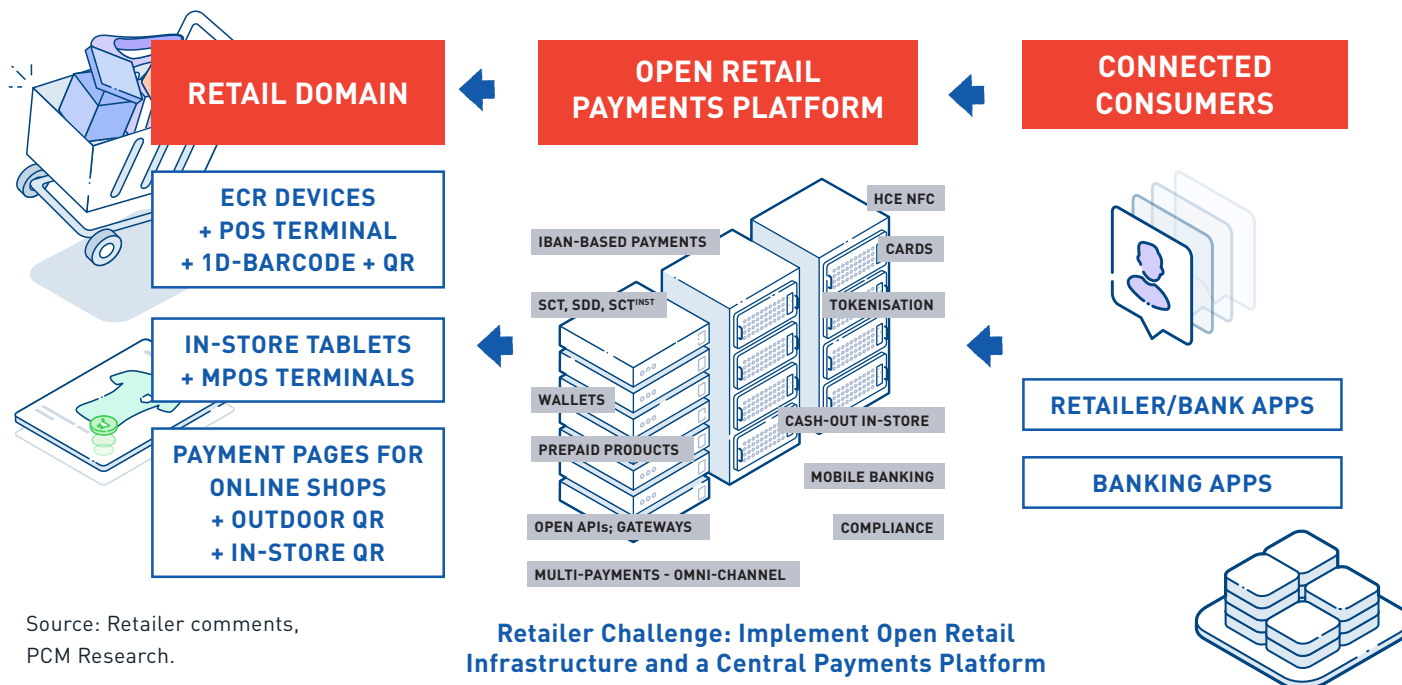
Open Payment Platforms can simply hide the multi-payment service complexity behind the scene. In addition, they can provide the basis for customer ID verification, purchase validation, upstream/downstream services and support - seamlessly and to the consumers' convenience. As payment management becomes more strategic for them, large merchants say that they see payments as a competitive differentiator for their retailing business.

In short, modern merchants are looking for Open Payment Platforms enabling omni-channel payment acceptance services for cards, IBAN-based bank payments, online wallets, prepaid products, in-app payments, mobile HCE NFC payments in-store and immediate payments in real-time.

Modern merchants see omni-channel payments combined with a flexible central payment platform as a prerequisite and an increasingly common starting point for omni-channel shopping. And many merchants now see payment management more strategically and as a competitive differentiator for their business.

Figure 11 illustrates the modern retailers high-level view of a flexible Open Payment infrastructure connecting checkout types with the card payment ecosystem and the emerging Open Banking payment ecosystem.

(Figure 11: Open Retailing Payment Infrastructure – Opportunity for Retailers)



Source: Retailer comments, PCM Research.

Merchants and the payments industry recognise that omni-channel payment platforms demand a higher level of complexity and integration, in combination with continuous regulatory upgrades to meet the need of regulators and card schemes.

Small merchants say they tend to follow the general adoption of new payment means, and they consider working with third-party providers to support their omni-channel infrastructure and their multi-payment acceptance service needs.

Large merchants say they tend to be much more reactive to new payment means and omni-channel payments especially if their competitors are also responding to the changing consumer behaviour. Also, they say that they push for some innovation on their own since this is a way for them to attract their consumers.

Modern merchants say that the worst-case scenario is for them to be unable to support those changes because their platform can't manage it.

In 2018, modern merchants say they see Open Payment Platforms as a realistic opportunity due to the global payment trends and the fast-changing payment ecosystems. Like global payment trends, there may be a business-driven rollout process first in Europe, the USA, mature countries like Canada, Australia, China and Singapore then followed by India and emerging countries in Asia Pacific like Malaysia, Indonesia and the Philippines.

To succeed in a rapidly changing environment, the payments industry needs to invest in the foundations for digital payment service innovation. Today, the payment platforms of acquirers and

processors are usually connected to the card payment ecosystem and accept cards and card form-factors. Only in the online shopping world do acquirers and processors support merchants accepting card-less payment services. And they are not connected to the Open Banking ecosystem – so far.

One significant impact of the Open Banking ecosystem is the emergence of mobile banking apps combined with bank payments directly from the account. In addition, payment initiation service providers (PISPs) and account information service providers (AISPs) are going to be new business partners for acquirers, processors and retailers.

Large merchants say it would be a pre-requisite for their omni-channel strategies to stay connected with the fast-moving digital payments world and to be capable of cooperation with the new types of card-less payment service providers.

The challenge for the payments industry is to transform existing payment solutions by channel into omni-channel Open Payment Platforms that combine the omni-channel payment acceptance requirements of modern merchants with the card payment ecosystem and the emerging Open Banking ecosystem.

## The Key Message: Overcome Payment Fragmentation with a digital Open Payment Platform that combines cards and card-less bank payments. Payment accounts are key while payment services are form-factors.

The challenge and opportunity for acquirers and processors is to develop a new kind of Open Payment Platform that interacts with any relevant payment ecosystem:

- The digital card payment ecosystem.
- The card-less bank payment ecosystem
- Trusted payment providers like e.g. Apple Pay, Google Pay, Samsung Pay, PayPal, Alipay, WeChat Pay...

In this report, the key term Open Payment is a synonym for combining omni-channel checkout tapes, card payments and bank payments. Figure 12 illustrates the important role a new kind of Open Payment platform would perform in connecting the individual merchant with both the card payment ecosystem and the Open Banking payment ecosystem.

With digital payment strategies in mind, building a new kind of Open Payment Platforms is a fundamental opportunity for the payments industry, especially for acquirers and processors.

Key drivers for an Open Payment Platform include financials, compliance, easy adoption of payment innovation, flexible omni-channel payments processing and checkout configuration,

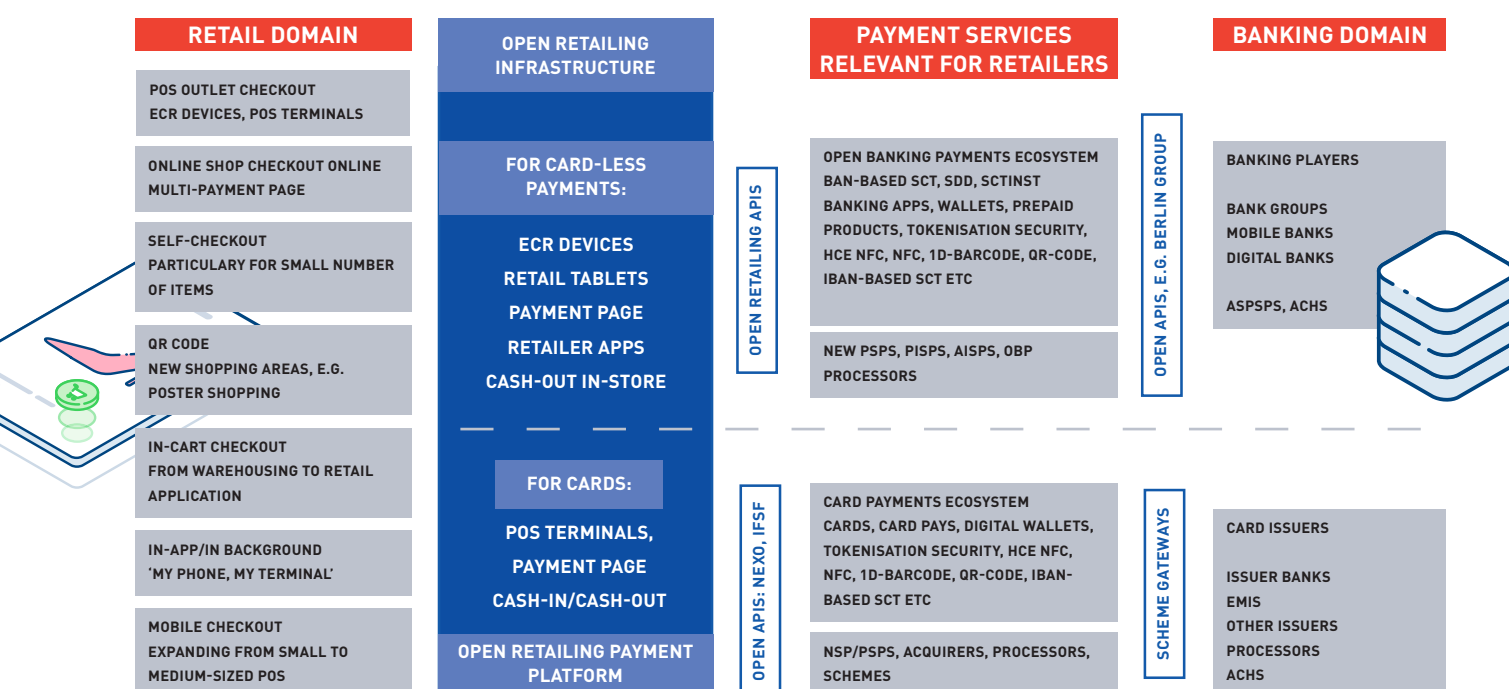
new security standards like tokenisation security, transparent reconciliation of payments and a frictionless omni-channel payment user experience.

Among others, the benefits of an Open Payment Platform for acquirers and processors would include:

- Key services for omni-channel payments processing, easy to add new payment services.
- Flexible device management, e.g. checkout network processing, in-app processing
- Customer insight: e.g. purchasing patterns, payments behaviour.
- Frictionless omni-channel consumer experience: cards, card-less, omni-channel.
- Omni-channel compliance with card schemes and regulators.
- Use of global payment standards, Open APIs, and state-of-the-art cloud-based modular platform technology.
- Partnering with digital banks and trusted payment providers using Open APIs.

The payments industry, the banking industry, payment service acquirers, processors and the globalised merchant businesses, can all overcome fragmentation by investing in Open Payment Platforms to succeed in both the global and local payments markets.

(Figure 12: Open Payment Platforms – Interface to Digital Payment Services)



Source: PCM Research.

Global payment trends and digital technologies are driving the change in the digital payment ecosystem. In addition, the omni-channel behaviour and seamless payment expectations of consumers, matched by merchants' omni-channel payment service demands, are challenging the payments industry – especially acquirers and processors.

**Furthermore, global businesses seek global solutions that enable them to consolidate their local business, access information in real-time and generate reports ad hoc to make certain decisions that help them manage their cash flow, inventory and monitor customer behaviour.**

Mobile technologies and new payment behaviours of connected consumers have gained momentum in the USA, Europe, China, and other so-called mature countries like Australia and Singapore. However, the rollout of digital technologies applies to the MEA region, Asia-Pacific and Latin America sooner rather than later.

The proliferation of payment channels and fragmentation of payment services has made payment service processing increasingly complex, and the blurring of previously separate payment channels is only set to continue.

Looking into the payment markets analysed for this report, connected consumers and payment fragmentation are the new normal for merchants and the supporting payments industry, making this a significant game changer.

The global payment trends identified in key payment markets are pushed and supported on the one hand by the international and domestic card schemes and on the other hand by innovative bank groups and FinTechs which have become the trendsetters for card-less payment services like IBAN-based bank payments, online wallets and mobile bank payment apps.

It can be clearly stated that card payments and card technologies push the globalisation of merchant businesses even in emerging countries like Malaysia, Indonesia and the Philippines. Further, payment fragmentation is the new normal in the digital payment ecosystem, challenging the existing payment platform solutions.

The payments industry and merchants face multiple digital payment trends and need to assess and position themselves quickly and carefully. Taking the advance of mobile bank payment apps into account, the key challenge for Open Payment Platforms is supporting omni-channel shopping and multiple payment services.

In 2018, forward thinking merchants see the deployment of Open Payment Platforms as a realistic opportunity due to the global payment trends and the fast-changing payment ecosystem.

The challenge for the payments industry is to transform existing payment solutions by individual channels into omni-channel Open Payment Platforms that combine the omni-channel payment acceptance requirements of merchants with the card payment ecosystem and the emerging Open Banking ecosystem.

In the digital payment ecosystem, the channels POS/MPOS/e-commerce/in-store/in-app are going to consolidate mid-term into a new kind of platform, which combines multiple payment services for merchants, including domestic payments and cross-border payments with cards, card-less advanced payments and mobile bank payments in-store.

The challenge and opportunity for acquirers and processors is to develop these Open Payment Platforms that interact with any relevant payment ecosystem:

- The digital card payment ecosystem.
- The card-less bank payment ecosystem.
- Trusted payment providers like e.g. Apple Pay, Google Pay, Samsung Pay, PayPal, Alipay, WeChat Pay...

The Key Message for the payments industry is - Have a clear digital strategy and overcome payment fragmentation with an Open Payment Platform to succeed in a rapidly changing environment.

## Payments Cards & Mobile

In business since 1994, Payments Cards & Mobile is an established hub for global payments news, research and consulting. We work with recognized industry experts to provide impartial, up-to-date and relevant information and analysis on every area of payments.

Personal relationships have been the hallmark of our business. We remain committed to working closely with our many long-standing customers and welcome new customers in producing quality business intelligence and providing a variety of ways in which you can consume this information. Our aim is to provide you with the highest quality data so you can position your business and key personalities in this increasingly competitive industry.

## PCM Research

Payments Cards and Mobile Research offers comprehensive, in-depth research into topics which are relevant and tailored to our clients' needs. Our in-house research facility is available for short term projects. We specialize in M&A activity, market entry data, country report analysis and statistics. Research reports on banking, payments and mobile payments worldwide.

Topics range across the measurement of efficiency and performance, card and payment service related information, the role of brands in banking and the impact of non-banks such as retailers and FinTechs on the financial services and mobile financial services market.

Payments Cards and Mobile offers specific research on all aspects of banking, card payments, card-less digital payments, Issuing/ Acquiring, financial services and the mobile financial services market.

## RS2

With international offices all around the world, RS2 offers secure payment services, payments software and managed services to over 130 clients in more than 35 countries. RS2 processes thousands of transactions every second, in all major currencies and covers all aspects of the card business. All solutions are built using the renowned BankWORKS® software modules which allow a flexible and quality solution for your business.

RS2, with its flagship solution Bankworks, uses one single platform for both Issuing and Acquiring enabling banks, PSPs, ISOs and merchant to transact globally providing end to end Issuing and Acquiring solution covering all Omni-channel use cases.

Irrespective of the type of payment, Bankworks generates one single statement including all payments generated from the various Omni-channel use cases. Whether its Cards, Alternative local payment methods or Bank transfer and Crypto currency Bankworks consolidates the entire business.

The Merchant is provided with one single view related to their Settlement, Sales, Authorization, Chargeback, Reporting and Ticketing capability using the Merchant Portal.

The dash board can be configured to provide the Merchant with real time information of what matters to them most - complimented by an alerting system using various delivery channel such as SMS, Emails, etc.

With the Issuing platform the customer can manage their entire business using the same platform.

## Acknowledgements

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## Author

Since 2011, Horst Forster is co-editor of the European Payment Cards Yearbook, responsible for market analysis and for compiling/writing the country profiles. Horst has expertise in both omnichannel card business and card-less payments, since 1996. Cross business and cross borders – his profession is business development and market intelligence services for the Payments Industry, including digital payments in an Open Banking ecosystem.

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