

Digital Payments Report 2016

SPONSORED BY



IN ASSOCIATION WITH





Powering Commerce Through Digital Solutions

AMEX Digital Solutions enable smart, secure ways to pay from virtually anywhere, with contactless payments, tokenization services, integration with leading digital wallet platforms, and more.

Visit www.amexglobalnetwork.com to learn more.



©



INDEX OF CONTENTS

Foreword	4
Digital Payments Market	5
Contactless/NFC	7
Point of Sale/mPOS	10
Digital Wallets	11
Connected Commerce and Wearables	16
E-commerce and Alternative Digital Payments	18
Regulation and Industry Standards	20
Data Analytics	22
Global Security	25
About the survey	26

FOREWORD

For years the payments industry debated whether contactless mobile payments would ever take off. In 2015, a number of developments occurred that helped to finally answer that question. Use of contactless payments around the world has increased as the continued rollout and expansion of services including Apple Pay, Samsung Pay and Android Pay have driven interest in and awareness of digital wallets among consumers and merchants. The question now is: What will it take for digital payments solutions to truly become a part of people's daily lives on a mass scale?

The key stakeholders in the payments industry – payment networks, card issuers, merchant acquirers, technology vendors and others – are working vigorously to develop the features and applications to make that happen. At a high level, the answer ultimately comes down to providing products and services that deliver additional value and a smooth experience for both consumers and merchants. Consumers today aren't simply looking to tap their smartphones against a point-of-sale terminal instead of inserting or swiping a plastic card. For digital payment solutions to gain mass adoption, they need to address the entire commerce experience for consumers and merchants.

As digital payments solutions have become more sophisticated and intuitive, so too have the expectations of customers. They want the ability to engage in commerce across channels – in-store, mobile and online – in a seamless and secure way. The industry professionals who participated in the 2016 Digital Payments Report survey cited poor customer experience as a main factor hindering digital wallet usage. In addition, consumer confusion over the number of digital wallet options that are available is also a top hindrance, they reported.

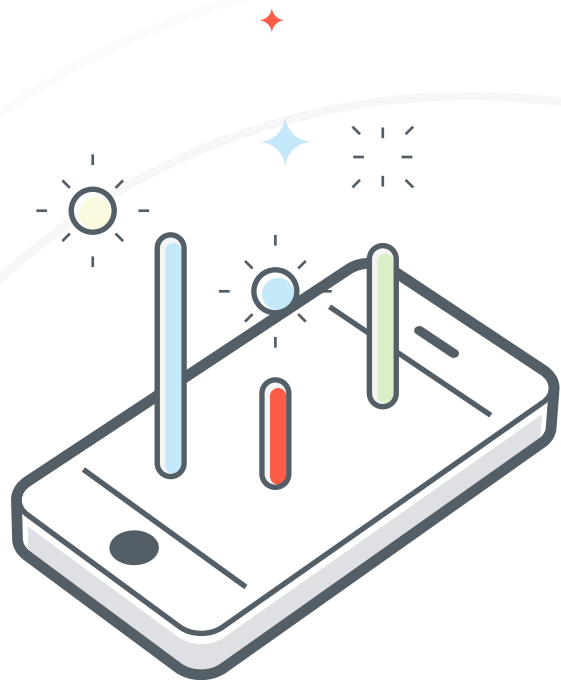
That means that for providers of digital commerce solutions to be successful, they must present consumers with a clear benefit over the experience they are encountering today. Examples include incorporating loyalty and rewards capabilities, enabling consumers to discover new merchants that are relevant to them, and simply making the purchase process easier. For merchants, the ability to attract new customers and easily deploy new digital services is

critical. Digital commerce solutions must remove the friction from the overall experience if merchants and their customers are going to adopt them.

Most importantly, such services need to earn the trust of users by providing a secure experience. Through strategic partnerships, the key stakeholders of the payments industry have made great progress on these fronts. By continuing to leverage our collective strengths and expertise, I'm confident that we will further drive innovation that will help us meet and exceed our customers' expectations.

E-Bai Koo

Senior Vice President of Global Network Business & Accertify at American Express



1 Digital Payments Market

Advancements in digital technology continued to shape the payments industry in 2015 as mobile, online and other digital forms of payments moved into the mainstream. From mass transit to gas stations and supermarkets, businesses of all sizes, across all the regions surveyed, now accept various types of digital payment, making paying for goods and services quicker, but above all, easier for the consumer.

While this seems very encouraging, what does the landscape look like beyond 2016?

The Digital Payments Report set out to survey and evaluate all the Payment industry stakeholders from the three major payments markets in the world: Americas, Europe and Asia Pacific. The industry survey respondents were largely senior executives from Card Issuers and Acquirers, Retail Banks, Financial Institutions, Payment Networks, Mobile Network Providers and FinTech suppliers.

The responses across the regions offer a unique insight into how the Payments industry is evolving in 2016 and beyond.

CARD BASED CONTACTLESS PAYMENTS will continue to grow. Research conducted by Swedish research firm Berg Insight forecasts that more than 70 percent of the world's POS terminals will be NFC-ready in 2019, up from 28 percent in 2014. Mobile contactless is also a growing trend across the payment industry, driven by the deployment of contactless terminals and smartphones with in-built biometric authentication technology.

POINT OF SALE terminal numbers have grown significantly in recent years due to advancements in technology and functionality. The market is being driven by the revolution in mobile payments and the increased usage of debit/credit cards for in-store purchases. Deployments of cloud-based POS systems, which transform 'dumb'

counter-top terminals into smart POS, is another emerging trend set to change the retail landscape.

DIGITAL WALLETS see increased deployment. With Apple Pay and Samsung Pay live in many markets, digital wallets are firmly back on the payments agenda. That said, there have been various high-profile casualties in the wallet wars, with more expected. A combination of structural and user experience factors will drive the adoption of the next generation of digital wallet. Apple Pay and Samsung Pay are shaping up to be strong competitors in this space, however they are not alone. Google's recent repositioning of Google Wallet, the launch of Android Pay, LG Pay and others certainly to follow, suggest the battle for digital wallet market share will be fast and furious. Growing adoption of in-app purchases by developers is also expected to drive digital wallet usage, which was a factor noted by our survey respondents.

WEARABLE TECHNOLOGY Where are the wearables? They are already here. As second and third generation devices are deployed, the market for wearables and connected commerce generally will continue to grow. According to International Data Corporation Worldwide Quarterly Wearable Device Tracker, the wearable market worldwide will reach 111 million units in 2016, an increase of 38 percent on 2015 figures. By 2019, total shipments are forecast to reach 214 million units, a five-year compound annual growth rate of 28 percent.

E-COMMERCE global spend is growing rapidly. Traditional payment methods are popular in mature markets, such as the UK and US, but other regions report strong growth in alternative payment methods, according to Worldpay's global Guide to Alternative Payments. The report defines alternative payments as those not involving credit and debit cards. As an example, in Asia Pacific, 23 percent of transactions were made using e-wallets, and this trend is set to grow over the next five years. Initial estimates suggest alternative payments will account for 59 percent of online transactions in 2017, up from 43 percent in 2012, notes the report. The e-commerce market is expected to amount to \$1,181 billion in 2016,

Digital Payments Report 2016

according to Statista – a statistics portal. Revenue is expected to show an annual growth rate (CAGR 2016-2020) of 10.67% resulting in a market volume of \$1,771 billion in 2020.

REGULATION AND INDUSTRY STANDARDS are still a key area of focus for the financial services industry and whilst a great deal of the new legislation is aimed at stimulating competition by lowering barriers to entry, compliance is becoming more time and resource intensive. From a regional perspective, the EMV Fraud Liability Shift still dominates headlines in the US. Despite the 1 October 2015 EMV chip liability shift, many US banks and retailers were slow to roll out chip cards and terminals. The latest data from Statista forecasts that 84% of cards will be chip enabled by the end of this year, with 95% by 2017.

In Europe, the Payments Services Directive (PSD2) is a major current focus for the payments industry. Third party access to accounts, the use of APIs to connect merchants and banks directly, and the ability to consolidate account information in a single portal will undoubtedly disrupt payment services.

The Asia-Pacific region is only just embarking on economic integration and it will be some time before a SEPA-style scheme is established. However, the region faces a number of unique challenges in regulating and harmonising payments. It is highly fragmented, and includes a mix of developed markets with high smartphone penetration and card use, and several developing economies where there is a greater reliance on cash and less access to technology and formal banking services. All of this in a region with multiple regulators, which have oversight responsibilities over individual aspects of payments regulation, some of which may conflict.

DATA ANALYTICS is increasingly driving the payments industry. Insights generated by analytics solutions may help organisations to benchmark themselves against competitors and increase revenue, drive down costs and improve productivity. Other specific applications include fraud reduction and marketing analytics to build insights from customer data to deliver value-added services and cross-selling opportunities.

SECURITY risks remain at the forefront of risk and regulatory agendas. Large-scale, global data breaches have further sharpened the focus on this area and the extreme impact and very public consequences of getting it wrong. Nowadays, the reputational consequences are far more impactful than the not insignificant financial and other consequences. A number of organisations have managed to turn such events into a positive outcome, whereas others have failed spectacularly to do so.

There are many challenges to overcome in this ecosystem, with the industry always at risk of being a couple of steps behind the criminals. From a payments ecosystem perspective, initiatives such as tokenisation and innovative authentication solutions tend to garner significant support. The conundrum faced by most is how to balance budgetary allocation on security spend against the perceived downside risk of limiting that spend – security products and services could engulf entire enterprise budgets.

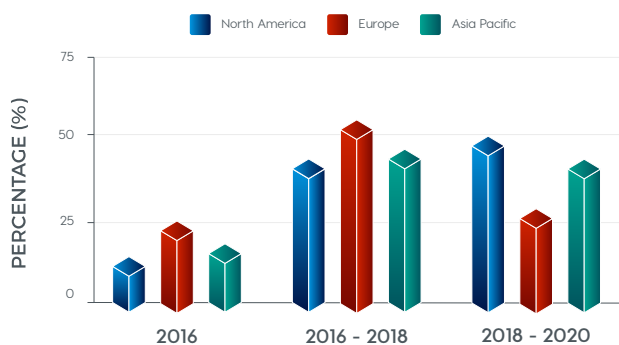
Irrespective, security professionals' challenge is absolutely stark: they need to get it right all the time; criminals only need to get it right once.



2 Contactless/NFC

Contactless cards continued to grow with increasing appetite from all stakeholders including consumers, who find it convenient, and merchants who like its speed - particularly where there is a requirement to move people very quickly through the payment experience, such as mass transit and fast food. This, coupled with the merchant acquirers offering lower merchants costs, compared to debit and credit and savings in the cost of managing coinage, is a strong incentive for driving contactless acceptance.

Contactless/NFC is the de facto standard - when do you see critical mass in acceptance?



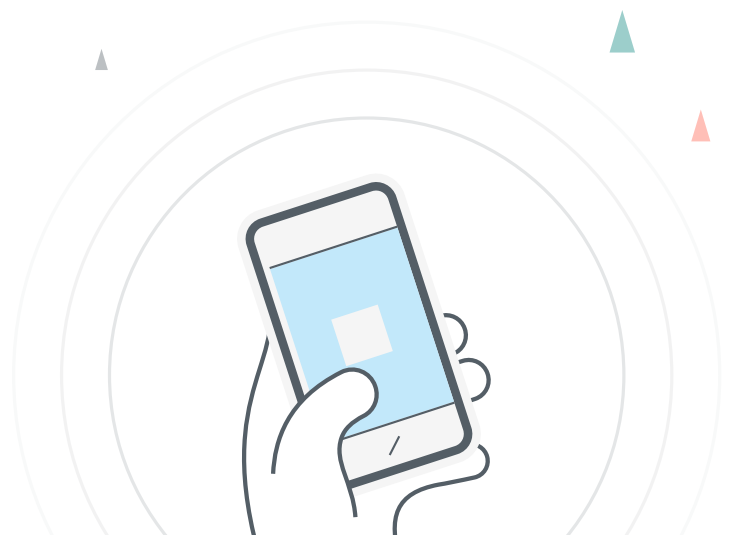
A key question in the survey was to ask respondents when they expected to see critical mass in acceptance for Contactless. Whilst there was some difference in the 2016 timeline, there is general agreement across all three regions that critical mass adoption is more likely to occur in the 2016 to 2018 timeline.

Contactless/NFC is the de facto standard - when do you see critical mass in issuance and usage?



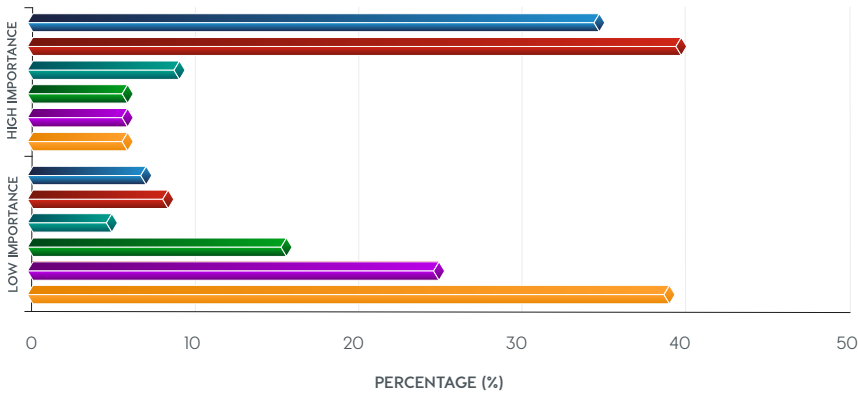
On the issuing side, much of the drive behind contactless/NFC technology is coming from mobile contactless. We believe the arrival of Apple, Samsung and others, with in-built biometric authentication technology in the handset will drive greater usage. LG and HTC are also set to launch handset manufacturer wallets for their users in 2016.

We also asked survey respondents when they expected to see mass issuance and usage of contactless. Again there was some variation across the regions in 2016. Unsurprisingly Europe, with its longer heritage in the EMV chip card market, dating back to the late 1990's, being the most optimistic. That said there was consensus across all three regions that 2016 – 2018 would be a major growth window.

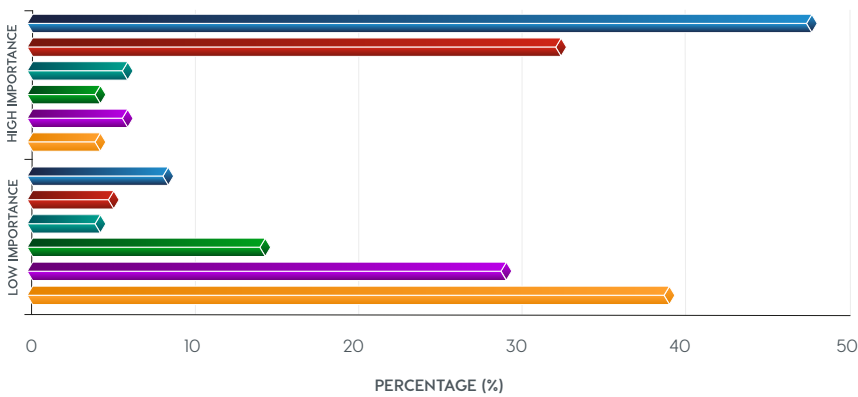


In which merchant sectors do you see greatest contactless/NFC usage?

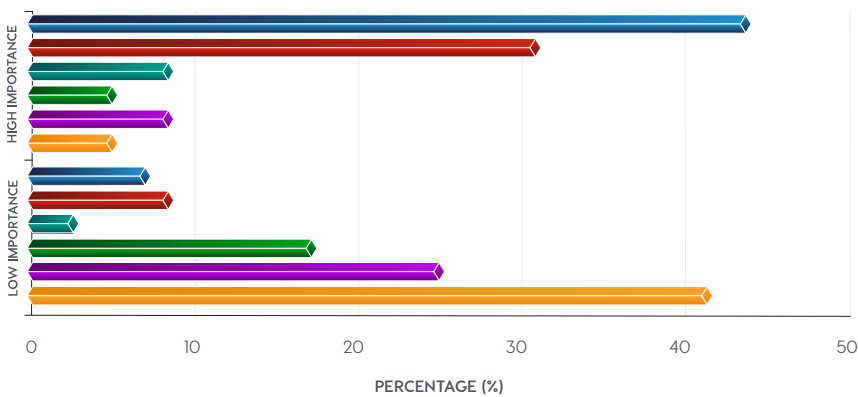
NORTH AMERICA



EUROPE



ASIA PACIFIC



The survey also asked respondents to rank what industry sectors they expected contactless to have the greatest usage. In all three regions respondents ranked fast food and beverage and mass transit as sectors where contactless payments had the highest usage with the lowest usage in high-value goods and electronic goods retail. These findings support the initial validations of the major schemes that there was a latent demand by consumers for low value card transaction where check-out speed is critical.

KEY

- Mass Transport
- Fast Food and Beverage
- Food Retail
- Fashion Retail
- Electronic Goods Retail
- High Value



The American Express Global Network

We power business growth for our partners, by building impactful commerce solutions such as contactless and EMV chip card payments, backed by our unique experience as an issuer, acquirer, and network.

Visit www.amexglobalnetwork.com to learn more.



®

3 Point of Sale/mPOS

POS terminal numbers have grown significantly in recent years due to advancements in technology and functionality. The market is being driven by the revolution in mobile payments, plus the increased usage of debit/credit cards for in-store purchases. Deployments of cloud-based POS systems are gaining momentum as the demands of the omni-channel consumer grow. Many retailers are now considering cloud-based POS applications as a viable alternative to static dumb terminals.

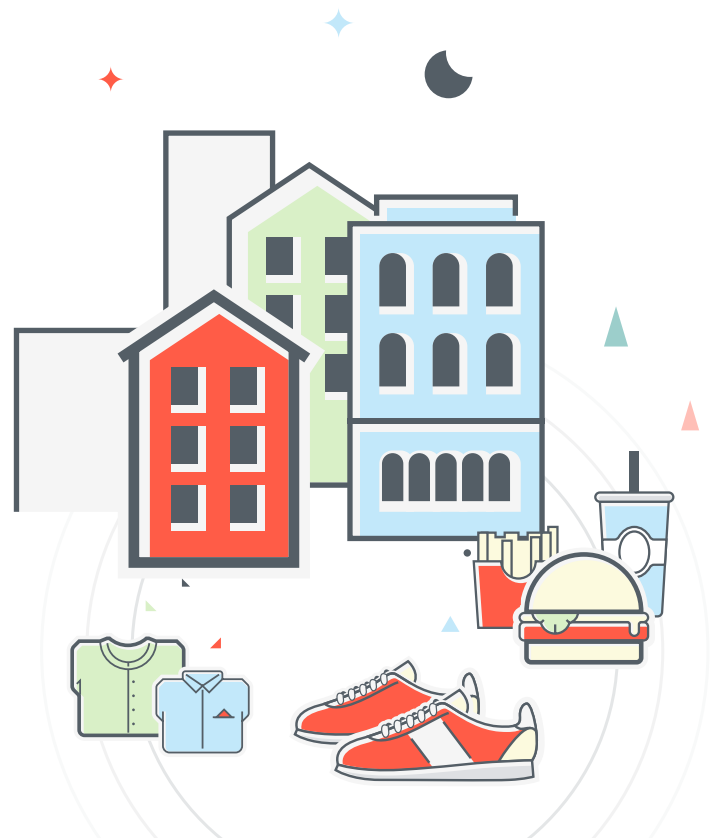
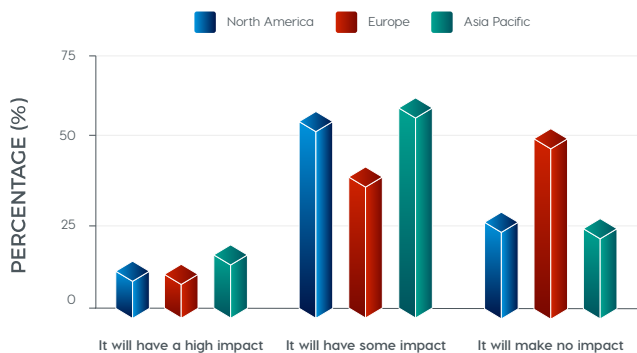
Key players, including VeriFone, Ingenico Group, PAX Technology, Toshiba TEC Corporation and NCR, have all expanded their product offering across the value chain to provide broader payment services to customers.

Apple Pay and Samsung Pay have also had a profound effect on POS acceptance. One of the key events in 2015 was Samsung Pay's announcement of its Magnetic Secure Technology (MST). This generated significant interest in the market when it was launched in 2015 because it enabled a magnetic stripe terminal to work with Samsung Pay.

In the survey we asked respondents how influential Samsung Pay's Magnetic Secure Transaction Technology would be at driving consumer usage at magnetic stripe terminals. In all three regions there was a modest belief that MST would have a high impact; North America was 18%, Europe was 10% and Asia Pacific was 16%. For Europe the low impact response is unsurprising due to the high level of contactless card issuance in major markets coupled with the high growth rates of contactless terminals through the continent. As an example of the speed at which this is occurring in Europe, all POS terminals have been mandated to accept contactless by 1st January 2020.

North America and Asia Pacific were more optimistic, although most respondents believed it would have little or no impact. This is likely a consequence of the rollout of EMV point-of-sale terminals, which most manufacturers have integrated with contactless technology.

How influential is Samsung Pay Magnetic Secure Transmission (MST) technology in driving consumer usage at POS that haven't been updated to contactless?



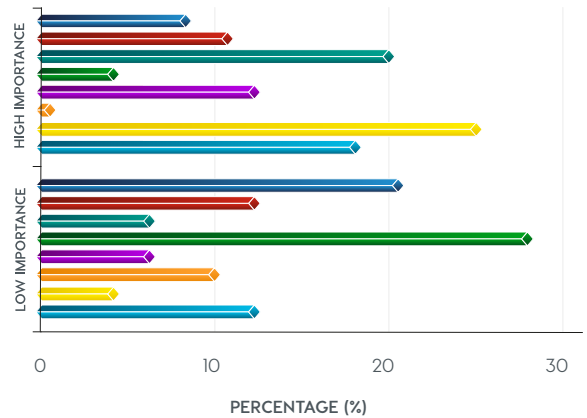
4 Digital Wallets

Fortunately for the industry, a perfect storm is building that may spur increased adoption of digital wallets, and particularly those that tokenize the data. The driving forces include near-ubiquitous presence of WiFi, a growing deployment of NFC POS terminals, the US EMV Fraud Liability Shift, and several large, public data breaches where cardholder details were captured. All of this has a huge cost to the industry both financially and reputationally. Against this backdrop both merchants and consumers are looking for newer, safer payment solutions and it looks like the more innovative wallet providers, especially where there is a second line of authentication such as biometrics, are set to capitalize on this.

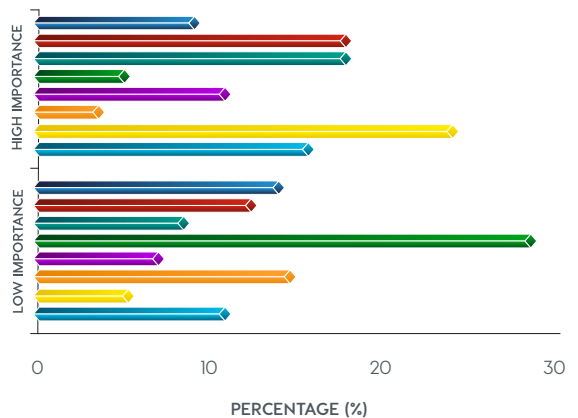
We asked the survey respondents who they thought the leading innovators in the wallet space were. In all regions, handset manufacturers led by quite some margin followed by alternative payment providers and the Payment networks, conversely the survey respondents believed that Mobile Network Operators (MNOs) and merchants were the least influential.

Who are the leading innovators in the digital wallet space?

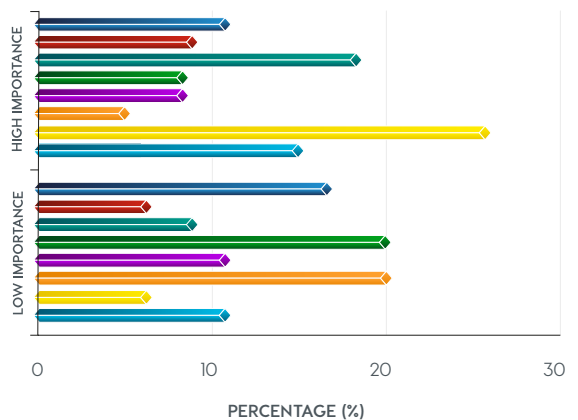
NORTH AMERICA



EUROPE



ASIA PACIFIC



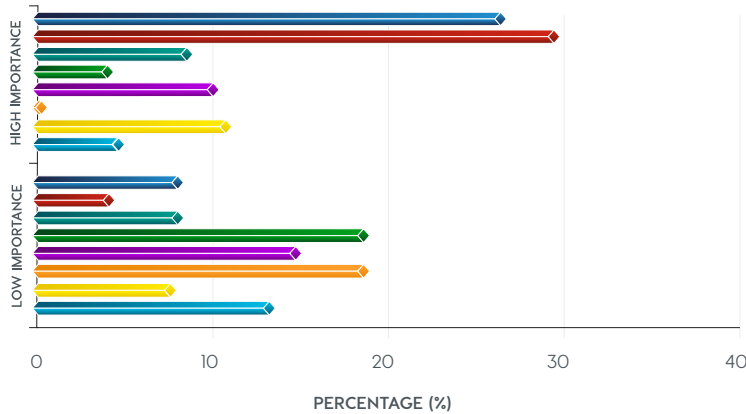
KEY

- Banks
- Payments Network (AmEx, Discover, MasterCard Visa, China UnionPay, JCB)
- Alternative providers (PayPal, Skrill, Alipay etc.)
- Mobile Operator (Vodafone, T-Mobile, Virgin)
- Internet Giants (Amazon, Facebook, Google, Twitter)
- Merchants and Retailers (Walmart, Alibaba, Tesco)
- Handset Providers (Apple, Samsung, HTC, LG)
- FinTech Players (Square, Stripe, Zapp etc.)

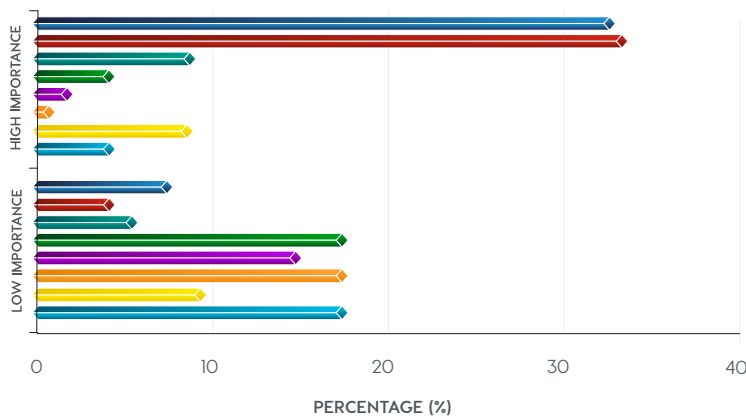
Digital Payments Report 2016

Who do you trust to deliver digital wallet services?

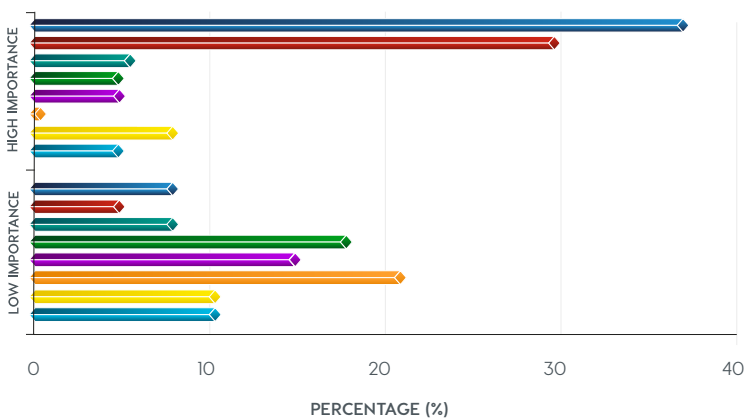
NORTH AMERICA



EUROPE

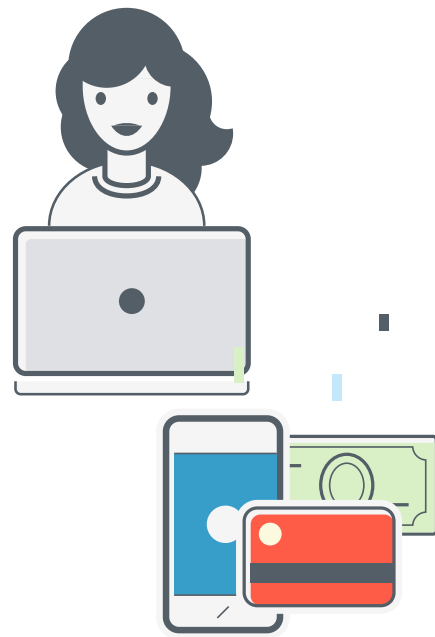


ASIA PACIFIC



We also asked who the respondents trust to deliver Wallet services. In all regions respondents said by a considerable margin, they believed payments networks and banks were the most trusted to deliver digital wallets, and merchants and MNOs were cited as the least trusted.

This represents good news for the financial services industry as it suggests that those within the industry still trust the security measures put in place by the banks and the payment networks. This, coupled with the consumer affinity with mobile devices, is set to drive further usage.

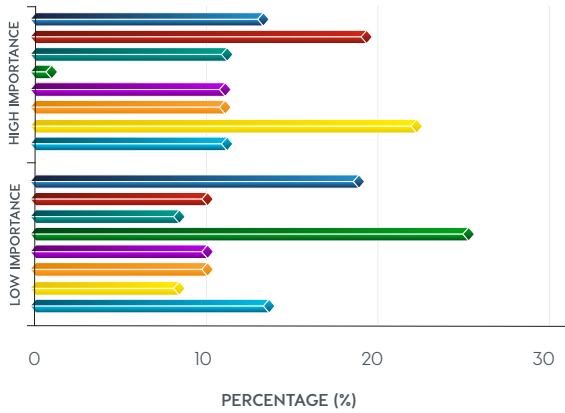


KEY

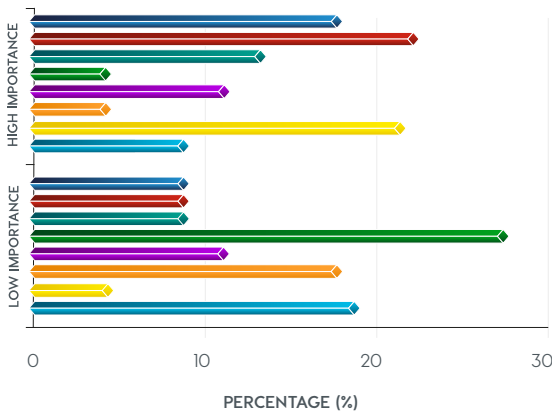
■ Banks	■ Internet Giants (Amazon, Facebook, Google, Twitter)
■ Payments Network (AmEx, Discover, MasterCard Visa, China UnionPay, JCB)	■ Merchants and Retailers (Walmart, Alibaba, Tesco)
■ Alternative providers (PayPal, Skrill, Alipay etc.)	■ Handset Providers (Apple, Samsung, HTC, LG)
■ Mobile Operator (Vodafone, T-Mobile, Virgin)	■ FinTech Players (Square, Stripe, Zapp etc.)

Who are the players most likely to drive growth in digital wallets in your region?

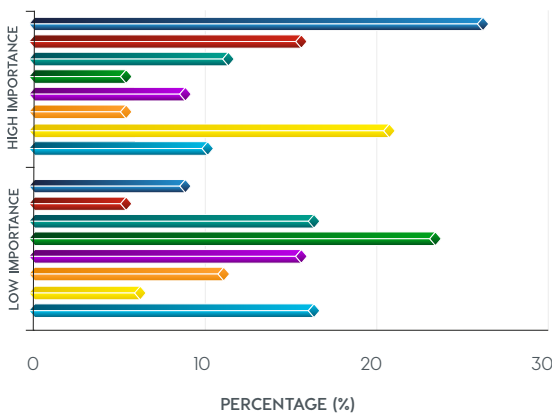
NORTH AMERICA



EUROPE



ASIA PACIFIC



When asked which players would most likely drive digital wallet usage in their respective regions, most respondents cited Payment Networks, Banks and Handset manufacturers. Conversely, MNOs and FinTech players fared worst. This may be surprising given the attention that has been paid to the FinTech industry and its ability to disrupt the incumbents. From the position of the MNOs it would have to be noted that for a long time they were a major part of the mobile wallet conversation but latterly have fallen away from this as ARPU (Average Revenue Per User) has collapsed and many have been required to focus on core business.

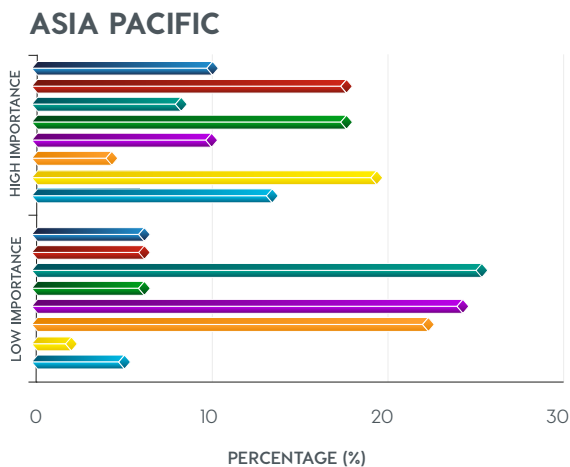
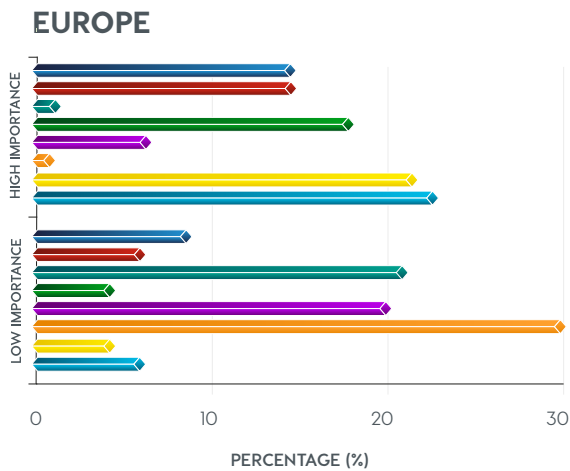
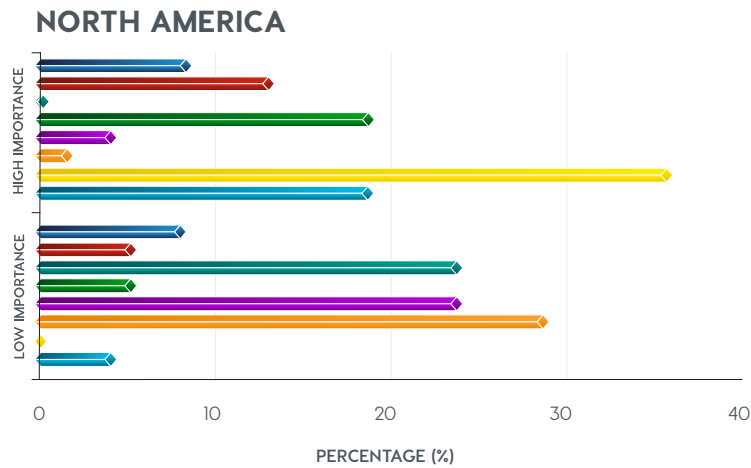


KEY

- Banks
- Payments Network (AmEx, Discover, MasterCard Visa, China UnionPay, JCB)
- Alternative providers (PayPal, Skrill, Alipay etc)
- Mobile Operator (Vodafone, T-Mobile, Virgin)
- Internet Giants (Amazon, Facebook, Google, Twitter)
- Merchants and Retailers (Walmart, Alibaba, Tesco)
- Handset Providers (Apple, Samsung, HTC, LG)
- FinTech Players (Square, Stripe, Zapp etc.)

Digital Payments Report 2016

What is hindering the deployment of digital wallets?



We asked about factors hindering digital wallet usage. Unsurprisingly, low merchant acceptance and poor user experience as well as the large number of digital wallet options were all seen as inhibitors, while regulation and lack of WiFi was seen as the least important factors.

Regionally, there is a big disparity in the responses. This may suggest that the development and deployment of digital wallet infrastructure regionally is still in its infancy, so no particular trends have emerged yet.

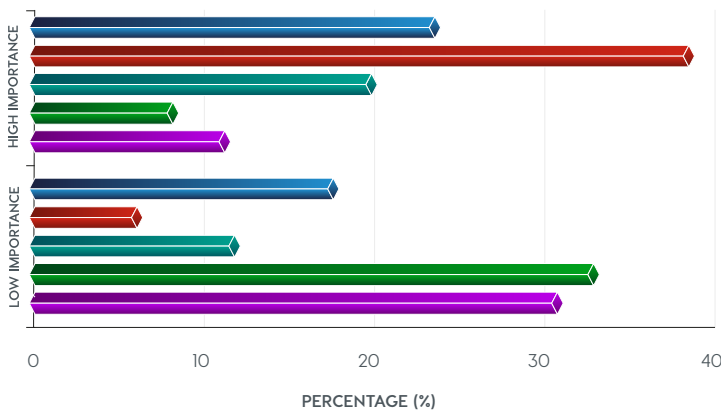
One point to note is that the US chart reflects the lag in contactless acceptance rollout highlighted in Chart 1.

KEY

- Trust
- Security concerns
- Lack of Wi-Fi
- Poor customer experience
- Over-regulation
- Under-regulation
- Poor acceptance
- Too many wallet options, causing consumer confusion



What are the key success factors for driving consumer usage of digital wallets?



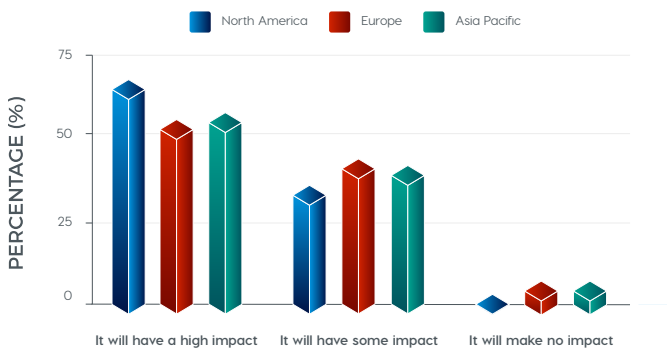
KEY

- Consumer education
- Merchant acceptance
- One click' checkout
- Development of Mobile apps and websites by merchants
- Point of Transaction promotions

We asked what factors were most likely to drive digital wallet usage, and most respondents cited merchant acceptance, consumer education, and one-click checkout as the fundamentals of a winning proposition.

It is interesting to note that despite much media hype regarding couponing and promotions at the point-of-sale, survey respondents scored this as one of the least influential factors driving consumer usage.

Do you think that in-app purchases will impact the usage of digital wallets?



Lastly we asked respondents whether they believed in-app purchases would impact the usage of digital wallets. All regions believed in-app purchases were highly important, with North America leading the fields with 66 percent of respondents followed by Asia Pacific with 56 percent and Europe with 54 percent.

The Asia Pacific region has embraced digital wallet adoption and is dominated by a few big players. Tencent's WeChat wallet and Alibaba's Alipay have been available to users in China for some time, whereas Apple has only recently been able to release its Apple Pay mobile payment system.

The number of active WeChat users now exceeds 650 million globally, according to Tencent's 2015 Q3 Results. Tencent is now reported to be accelerating the expansion of its payment services overseas.

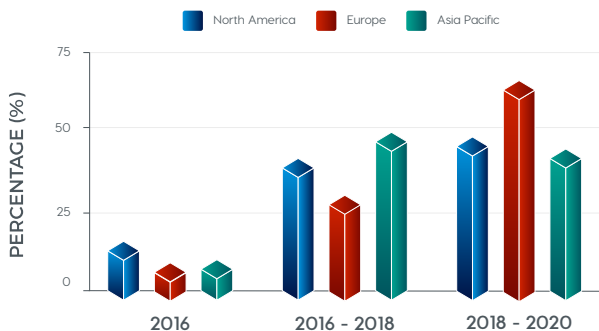
Tencent's WeChat is also looking to expand overseas via a partnership with Standard Bank in South Africa. Tencent has also supported Chinese WeChat users in making payments abroad. In mid-November 2015, Tencent announced that over 200 million users have loaded their bank cards to its QQ Wallet and Weixin Pay services, and payment volumes have sharply increased, especially for person-to-person, e-commerce, and O2O transactions. The WeChat mobile payment system is also available in more than 20 countries, according to the Tencent financial results.



5 Connected Commerce and Wearables

The worldwide wearable device market (commonly referred to as wearables) will see continued growth as second and third generation iterations reach the market. These new devices will build upon the hardware and software of their predecessors and resolve some of the shortcomings and concerns identified by customers today.

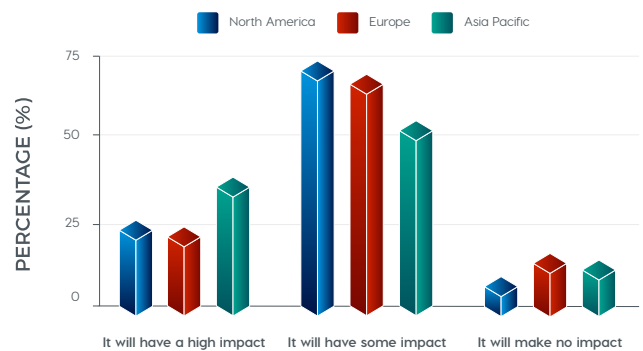
When do you think wearable devices will make an impact on the payments market?



Survey respondents thought wearable devices would make an impact on the payments market. 53 percent of respondents thought it would happen between 2016 and 2018 in North America, whereas in Europe and Asia the figures were 34 percent and 56 percent, respectively.

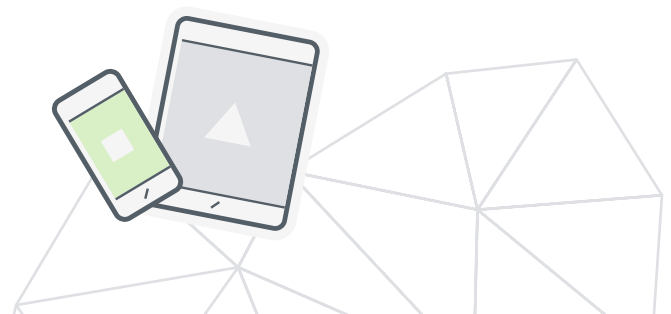
The survey findings are very much in line with International Data Corporation (IDC) Worldwide Quarterly Wearable Device Tracker, where the worldwide wearable device market is forecast to reach a total of 111.1 million units shipped in 2016, a significant increase of 38 percent from the 80 million units expected to ship in 2015. By 2019, the final year of the forecast, total shipments will reach 214.6 million units.

To what extent do you feel social commerce will impact the payments industry?

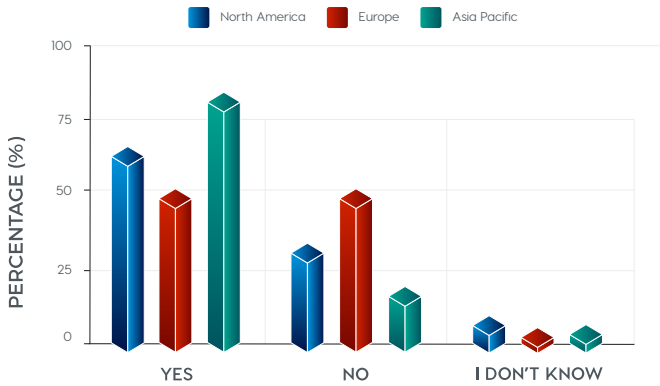


Social media brands are now looking at ways to monetise their user base and data by opening up social marketplaces for buyers and sellers on their platforms. According to Statista, on average 28 percent of time online is spent on social media. A recent poll commissioned by Stop Procrastinating, a productivity website, found that around 15 percent of Facebook users surveyed admitted to accessing the site while in the shower or driving, and around 30 percent of users accessed the site while in the bath or at the cinema. And 45 percent said they had made an excuse to leave a real-world social occasion to use the site.

When we asked to what extent respondents felt social commerce would impact the payments industry, more than 87 percent of those who answered the survey overall believed social commerce would have an impact; more than 21 percent felt the impact would be high.



Do you think that social commerce and wearable devices will be mainstream for making payments?



When it came to North America, 63 percent of respondents felt social commerce and wearable devices would become mainstream, but respondents were evenly split about the outlook with regards to the mainstream use in payments that social commerce and wearables would make in Europe, with a 49 percent split either way.

In Asia, 81 percent of the respondents categorically believe social commerce and wearable devices will become mainstream.

With regard to social commerce, in the last decade social media has spread from university campuses to a global user base of billions. The number of Facebook users has climbed to around 1.55 billion since it was founded in 2004. Twitter and Instagram users number more than 316 million and 300 million respectively, according to data from Statista.



6 E-commerce and Alternative Digital Payments

In the e-commerce market sales are expected to amount to \$1,181 billion in 2016, according to Statista, showing an annual growth rate (CAGR 2016-2020) of 10.67% resulting in a market volume of \$1,771 billion in 2020.

In the US, sales are expected to amount to \$314 billion in 2016. The UK Card Association, reports a third of all UK card spending is online, with around £180 billion (\$270 billion) spent each year. China tops the e-commerce market, both within the Asia Pacific region and globally. Sales are expected to amount to \$303 billion in 2016.

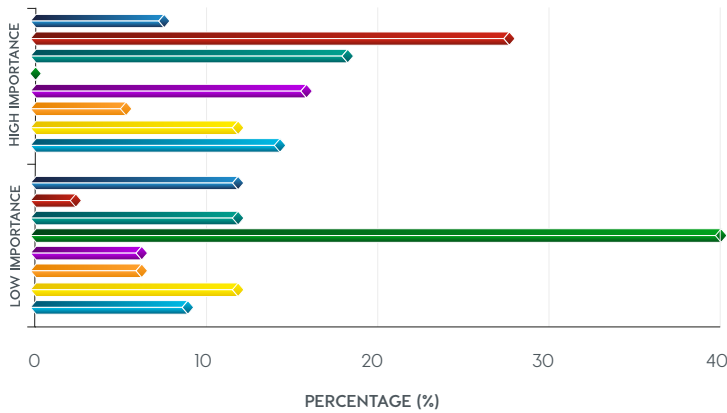
We asked the survey respondents who they most trusted to deliver payments for e-commerce/m-commerce. In all three regions, respondents voted banks and payment networks as the most trusted entities, which once again reinforces the fact that the industry believes that consumers trust and want to receive payment services through their banks and payment networks. Again the industry saw MNOs as the least trusted.

E-commerce is now approaching 25% of total retail payments in developed markets - who do you most trust to deliver payments for e-commerce/m-commerce?

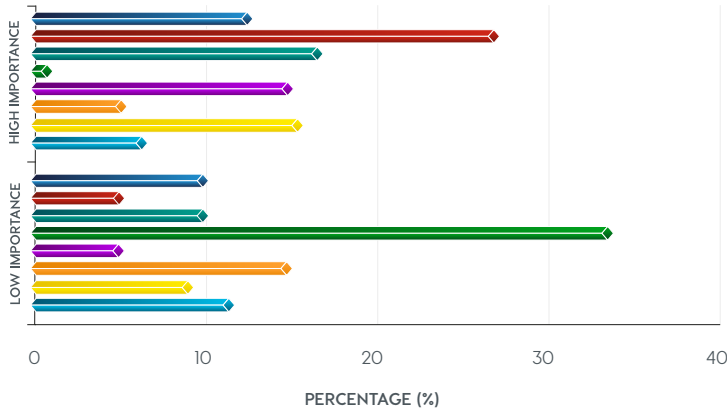


Who is best placed to make the biggest impact in online digital payments in the next 3 - 5 years?

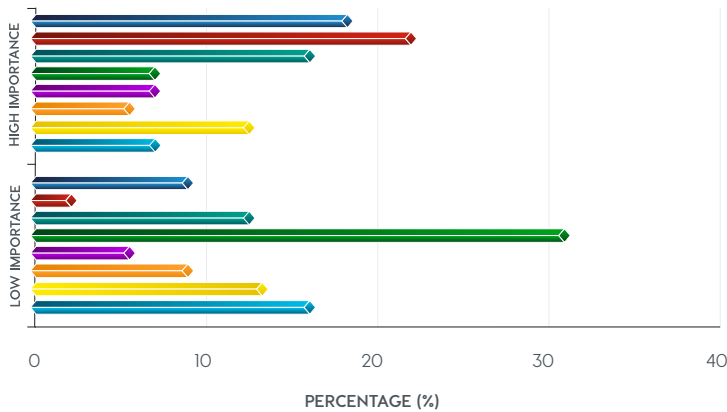
NORTH AMERICA



EUROPE



ASIA PACIFIC



When asked who was best placed to make the biggest impact in online digital payments in the next 3-5 years, all regions believed payment networks and alternative providers were best placed to make the biggest impact, whereas MNOs were seen as making the least impact.



KEY

- Banks
- Payments Network (Amex, Discover, MasterCard, Visa, China UnionPay, JCB)
- Alternative providers (PayPal, Skrill, Alipay etc.)
- Mobile Operator/MVNO (Vodafone, T-Mobile, Virgin)
- Internet Giants (Amazon, Facebook, Google, Twitter)
- Merchants and Retailers (Walmart, Alibaba, Tesco)
- Handset providers (Apple, Samsung, HTC, LG)
- FinTech players (Square, Stripe, Zapp etc.)

7 Regulation and Industry Standards

Regulation and industry standards are still a key area of focus for the financial services industry and whilst a great deal of the new legislation is aimed at stimulating competition by lowering barriers to entry, compliance is becoming more time and resource intensive.

US EMV

EMV still dominates the headlines in the US. Following the October 2015 EMV Fraud Liability Shift, many banks and retailers have been rolling out EMV terminals and issuing EMV cards. Forecasts from Statista predict 84% of US banks will have deployed chip cards by year end and 95% by 2017.

REVISED DIRECTIVE ON PAYMENTS SERVICES (PSD2)

In Europe, PSD2 is a current focus for the payments industry and will impact all aspects of the payment ecosystem. The key points of the Directive include an extension of scope beyond Europe with so-called 'one leg out' transactions, where at least one of the account servicing PSPs on either end of the transaction is located within Europe. The definition of 'payment institution' is also being extended to two new categories of third-party payment providers: the Payment Initiation Service Provider (PISP), and the Account Information Service Provider (AISP).

The Directive will also introduce a standard way for any licensed third-party to access accounts and initiate payments on behalf of any customer that authorises them to do so. This will not only change how customers interact with their banks, but also open the market to new entrants to provide value-added services around the customer's own financial data.

PSD2 prohibits surcharging. It seeks to standardise the approach to this and complement the work on capping interbank fees for card-based transactions.

Perhaps the most significant change is the requirement for all payment institutions to implement 'strong customer authentication' for electronic payments and online account access. This is defined as the use of at least two independent factors as part of the authentication process.

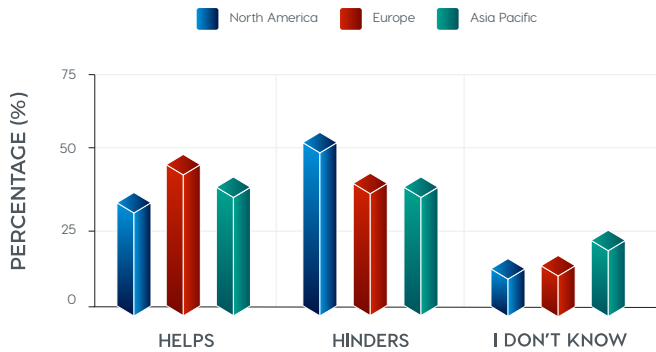
ASIA PACIFIC

Increased trade flow between Asia Pacific and Europe is driving payment activities between the respective regional financial institutions. But while the SEPA project is now firmly established in Europe, the Asia Pacific region is only just embarking on economic integration and it will be some time before a SEPA-style scheme is established.

However, the region faces a number of unique challenges in regulating and standardising payment types and formats. The region is highly fragmented, and includes a mix of developed markets with high smartphone penetration and card use, and several developing economies where there is a greater reliance on cash and less access to technology and formal banking services. The region also has multiple regulators, which have oversight responsibilities for individual aspects of payments regulation, some of which may conflict.



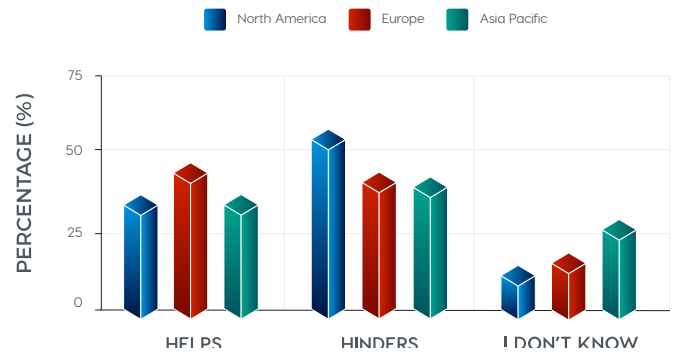
From a consumer perspective, do you think regulation helps or hinders innovation in digital payments?



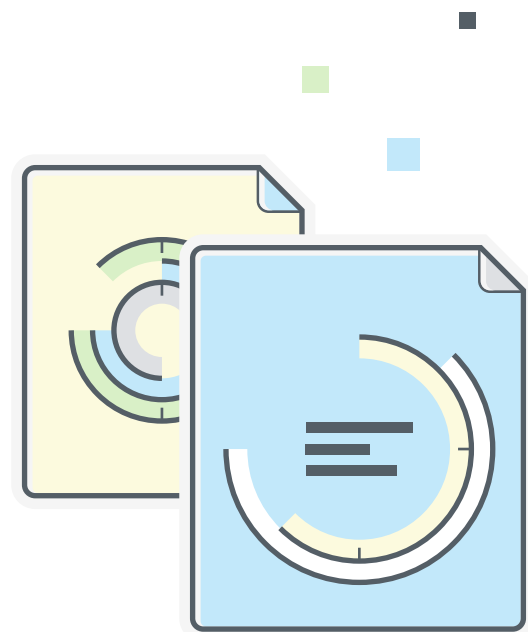
We asked the survey respondents, from a consumer perspective, do you think regulation helps or hinders innovation in digital payments? In North America, 53 percent of respondents think that it hinders rather than helps innovation, whereas in Europe and Asia Pacific the figure was considerably lower at 40 percent in Europe and 39 percent in Asia.

In Europe, one of the reasons for this belief in regulation is due to the Payments Service Directive (PSD) and the Single European Payments Area (SEPA), which has helped increase competition amongst financial institutions and has been a main enabler of the FinTech revolution.

From a merchant perspective, do you think regulation helps or hinders the acceptance of digital payments?



We asked the same question about regulation helping or hindering the acceptance of digital payment from a merchant perspective. 55 percent of respondents felt it hindered rather than helped in North America. In Europe and Asia, the figures were 41 percent and 40 percent, respectively. This again reflects the advent of PSD and SEPA in Europe.



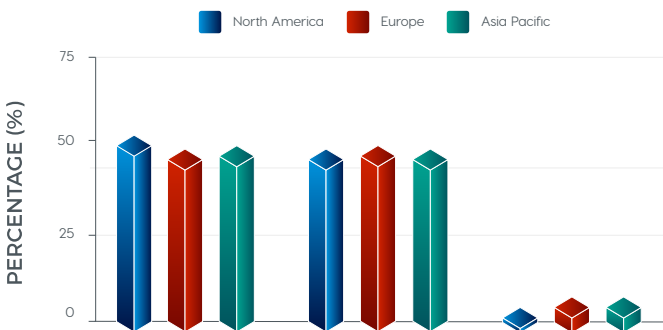
8 Data Analytics

The use of data globally is growing exponentially. From mobile phone signals to social media sites, online banking and the Internet of Things, we create around 2.5 quintillion bytes of data every day, according to IBM – so much so that 90 percent of the data in the world today has been created in the last 2 years.

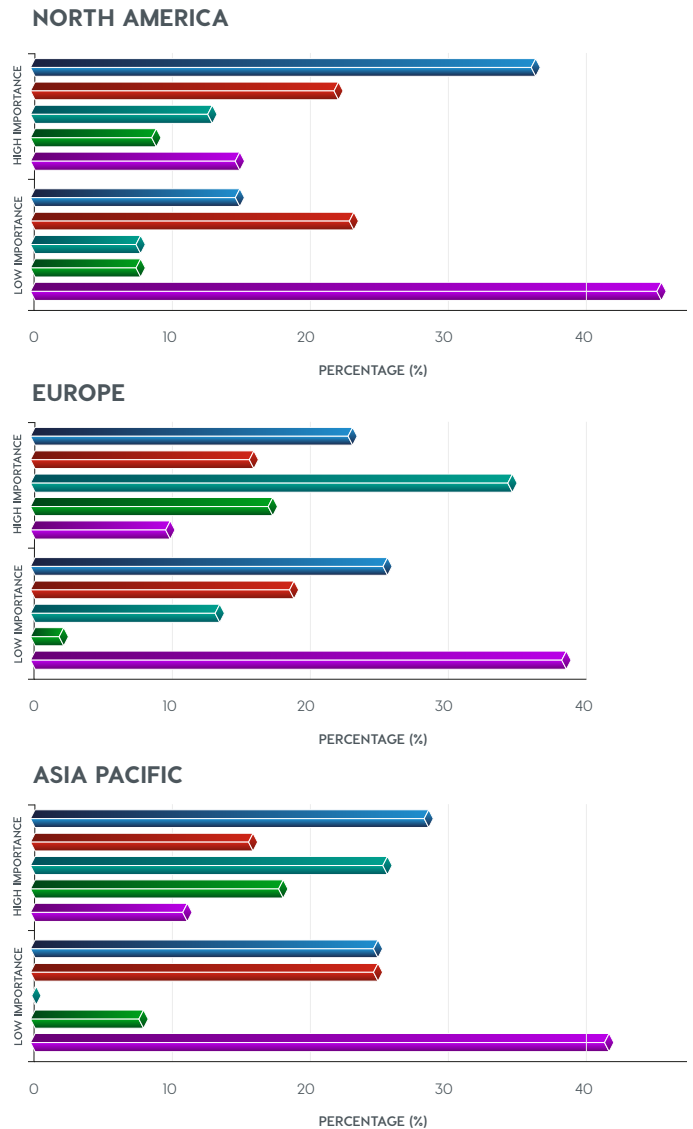
The payments business is increasingly driven by information. Insights generated by analytics solutions may help organisations to benchmark themselves against competitors to increase revenue, drive down costs and improve productivity. Other specific applications include fraud reduction and marketing analytics to build insights from customer data to deliver value-added services and cross-selling opportunities.

The term ‘Big Data’ has generally come to mean data which is too large or complex to be processed using traditional database techniques. The challenge and opportunity of Big Data is coping with the sheer quantity of data available, and analysing it to generate useful insights.

How important are data analytics to the digital payments industry?



What type of data analytics are most important to your organisation?



KEY

- Consumer insights for targeted offers
- Consumer insights for influencing purchasing
- Fraud and risk management information
- Data analysis for competitive advantage
- Data analysis for productivity purposes

Who is best positioned to deliver data-driven solutions such as Marketing and Risk Management to the digital payments industry?

How important is data analytics to the digital payments industry? In all regions, more than 94 percent of respondents agreed that data analytics was important, and more than 47 percent considered it 'most important'.

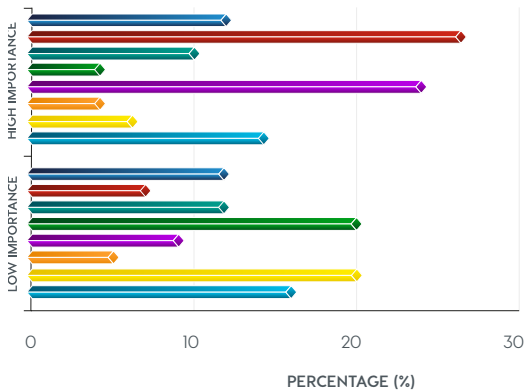
As to the most important type of data analytics, in North America, consumer insights for targeted offers and influencing purchasing were cited as most important (37 percent and 22 percent, respectively), whereas data analytics for productivity was seen as the least important (46 percent).

What is interesting here is that the responses conflict with the findings of chart 9, in which respondents felt offers were a weak motivator for driving digital wallet usage. The conclusion we can draw is that, in the data analytics environment, marketers are driving the data argument whereas for wallet usage it appears to be driven by technology and operations.

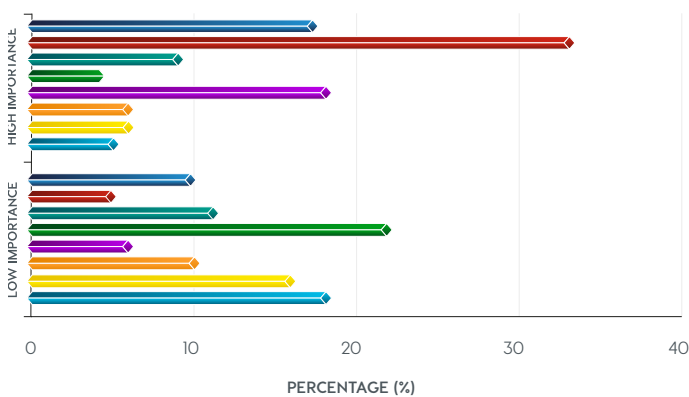
In Europe, fraud and risk management information and consumer insights for targeted offers were cited as the two most important types of data analytics (35 percent and 23 percent, respectively), whereas data analytics for productivity was again seen as the least important (39 percent).

For Asia Pacific, consumer insights for targeted offers and fraud and risk management information were the two most important types of

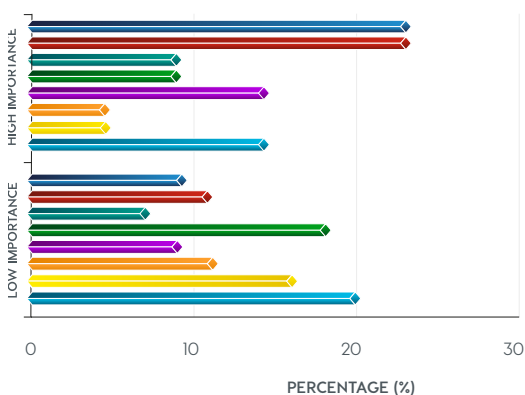
NORTH AMERICA



EUROPE



ASIA PACIFIC



KEY

- Banks
- Payments Network (Amex, Discover, MasterCard, Visa, China UnionPay, JCB)
- Alternative providers (PayPal, Skrill, Alipay etc.)
- Mobile Operator/MVNO (Vodafone, T-Mobile, Virgin)
- Internet Giants (Amazon, Facebook, Google, Twitter)
- Merchants and Retailers (Walmart, Alibaba, Tesco)
- Handset providers (Apple, Samsung, HTC, LG)
- FinTech players (Square, Stripe, Zapp etc.)

Digital Payments Report 2016

data analytics (29 percent and 26 percent, respectively). Data analytics for productivity was again seen as the least important (42 percent).

As to who was best positioned to deliver data-driven solutions to the digital payments industry, Alternative Payment providers (27 percent) and Internet giants, such as Amazon, Google and Facebook (24 percent) were considered the best positioned to deliver data-driven solutions in North America, whereas MNOs and handset providers were the least influential.

In Europe, payment networks and banks were considered the best positioned to deliver data-driven solutions (33 percent and 18 percent respectively), whereas MNOs and FinTech players were the least influential.

Whilst in Asia Pacific, banks and payment networks were considered the best positioned to deliver data-driven solutions (23 percent in both) and MNOs and FinTech players were the least influential.



9 Global Security

High-profile data security breaches and the theft of sensitive cardholder and personal data once again dominated headlines in 2015.

With regard to card fraud, losses are at record levels. Card fraud worldwide grew 19 percent last year compared to card sales, which grew only 15 percent, according to figures released by the Nilson Report.

Global card fraud losses topped \$16.3 billion in 2014 against global sales of \$28.8 trillion. Fraudulent sales accounted for 5.65 cents in every \$100 spent last year.

Card fraud is projected to increase to \$18.3 billion in the next 5 years to 2020. Fraud to sales losses are projected to rise to 5.74 cents in every \$100 in 2015, before falling back to 5.26 cents in every \$100 in 2020.

Recent well-publicised encryption flaws have made it easier for attackers to compromise website security and capture sensitive customer data for criminal gain, electronic surveillance and so on.

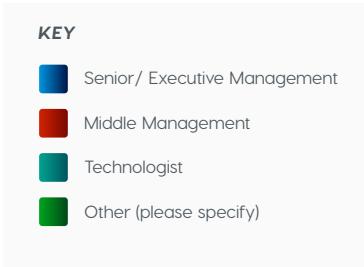
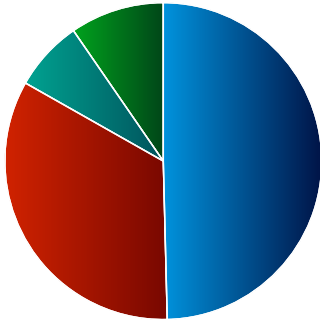
Attacks such as Heartbleed, Poodle, Feast and Beast use man-in-the-middle style techniques to compromise encryption levels. All these attacks exploit security vulnerabilities in Secure Sockets Layer (SSL) and early versions of Transport Layer Security (TLS) protocols.

With acceptance of mobile and other new forms of payments expected to double in the next two years, it is a critical need for organisations to improve their payment data security practices.

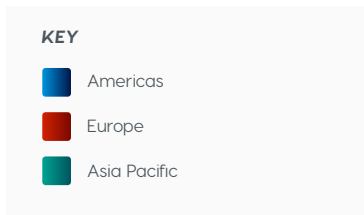
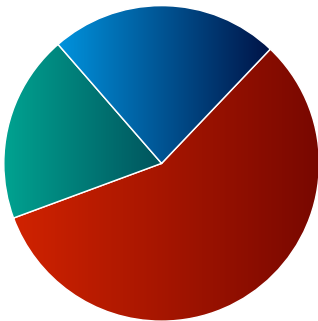


10 About the Survey

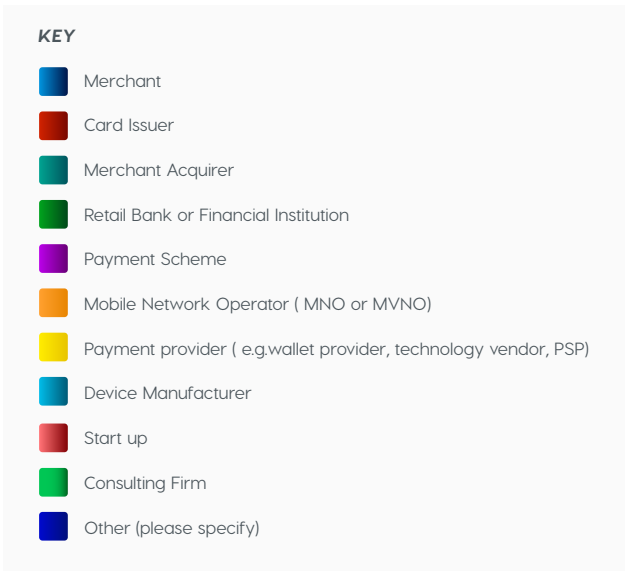
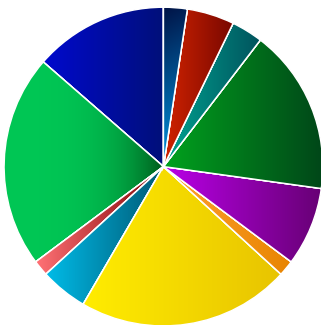
What is your role?



Which region are you in?



Type of company



The 2016 Digital Payments Report survey was conducted between January and March 2016. Respondents to the survey were over 250

Advanced payments expertise, knowledge and delivery

Account is a leading provider of strategic and operational consultancy services to the payments industry worldwide with specialist expertise, knowledge and delivery of advanced payments

Our clients include Banks, the Card Schemes and financial services institutions, payments and technology providers, telecom operators, corporates, merchants, and government organisations.

We aim to make a powerful, positive difference to our clients' futures.

Why choose Account?

Our consultants are all seasoned practitioners with front line P&L experience, combining unrivalled strategic expertise with operational know-how.

We have a passion for delivering real and lasting value and we bring focused, world-class expertise to complement client teams.

To discuss your advanced payments project call us on +44 (0)20 7839 4930



Digital Payments Report 2016



London
Alex Rolfe
Managing Director
+44 (0) 1263 711800

Enquiries
alex@paymentscm.com

www.paymentscardsandmobile.com



London
John Berns
Managing Partner
+44 (0)20 7839 4930

Enquiries
john.berns@accourt.com

www.accourt.com

Accourt is a leading provider of strategic and operational consultancy services to the payments industry worldwide.

Our clients include banks, the card schemes and financial services institutions, payments and technology providers, telecom operators, corporates, merchants, and government organisations.

Accourt specialises in addressing issues affecting the payments community. Our unique blend of experienced industry specialists and local market intimacy has positioned us as the advisor of choice for market leaders across the industry. We aim to make a powerful, positive difference to our clients' futures.