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Payment Methods Report 2017

Insights into the e-wallets landscape



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Payment Methods Report 2017

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Introduction

Driven by the industry's need for a common framework of payments terminology and an educational overview of payment instruments and payment methods categories, in 2016 we successfully launched the first edition of The Ecommerce Payment Methods Report. Its educational scope allowed us not only to place special emphasis on customer preferences per region or industry, but also to highlight best practices from both merchants and PSPs in defining the right payment mix.

We have been encouraged by the huge success and overwhelming market response – a further proof that this report fills a gap in existing available data and helps cultivate a more accurate understanding of the industry.

In 2016, we have seen two developments that will only increase the number of alternative payment methods (and potentially lead to further fragmentation). In Europe, the landscape of payment methods is likely to change as a result of PSD2. More payments will be made via the regular SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD) infrastructures, since it will become easier for merchants and their customers to initiate payments online and via mobile. This development is likely to impact card payments the most, as the costs and the usability of the PSD2-driven payments are expected to be competitive. Globally, the proliferation of e-wallets has intensified with the Pays (Apple Pay, Samsung Pay, and Android Pay) rolling out globally, with banks starting to compete by developing their own e-wallets and merchants partnering with fintech and banks to develop their e-wallets, as well.

This year's report presents the key trends and developments in payments methods in Europe, the US, India, and China. Europe is going to be swept by PSD2, and its diverse payment ecosystem remains as versatile as ever. The US is showing signs of moving away from the ever-dominating card payments, India is going through a period of rapid digitalisation, with a large impact on the payment space, and China has seen the rise of WeChat and Alipay, two of the biggest e-wallets in the world. We look at these developments, providing region-by-region summaries of the most important current trends.

The report further presents a summary of the evolution of payment methods, and how that has impacted and shaped the payments landscape today and it brings to the fore a complete and comprehensive mapping of payment instruments and methods, looking into how people pay and with whom they choose to pay. The current edition also includes a comprehensive list of payment methods, as well as an infographic that is mapping these payment methods. Moreover, we take a deep dive into the ecosystem of e-wallets, a payment method particularly dominant in China, and in India, where it competes with the UPI infrastructure. As for Europe and the US, there are only a few success stories on e-wallets side.

It is important to point out that best practices are rarely transferable across geographies and even if adoption of the 'Pays' is happening, it is rather slow. The e-wallet section incorporates research done by the Paypers in an exclusive infographic of e-wallets mapping the 53 most prominent e-wallets today on several functionalities. The full results of the research are also enclosed.

Furthermore, the report includes insights from prominent Payment Service Providers; experts from several PSPs all give us their take on a variety of topics in the payment industry. \rightarrow

Introduction

Kim Sandström from Trustly elaborates on the state of online banking in Europe, and how the satisfaction and trust rates impact banks. Bo Christensen from MobilePay grants insight into how the bank-backed e-wallet was developed and what makes it thrive. Laurence Stock from Samsung Pay introduces us to the mobile wallet, developed by Samsung, explaining how it works and what their plans are for the future. David Dechamps from Mastercard talks about the impact of technology on the cards industry. Rossini Zumwalt from Emergent Payments introduces us to the payment landscape of emerging markets, and their strategies in navigating those markets.

Payment method integrators, as well, grant their expert knowledge to this paper. Ralf Ohlhausen from PPRO divulges on the topic of alternative payments and their impact on global commerce, while Sebastián Kanovich from dLocal explains the payment landscape in Latin America and the opportunities that lie there. Hiroyuki Sato from DOCOMO shares his views on benefits for merchants from alternative payments.

On top of this, experts from Aite Group, Kapronasia, and Mobey Forum have contributed editorials to provide insights into country-specific trends and characteristics. Aite Group shares an interesting story on e-wallets in the US, and the possibility of e-wallets to take on the credit cards. Kapronasia, in turn, sheds light on the increasing popularity of QR codes in China, as well as how India is shifting to a more and more digital payment ecosystem. Finally, Mobey Forum reports on the ins and outs of the market for e-wallets in Europe.

The Payment Methods Report 2017 is a must-read key summary of the most important basics in the payments industry. Its main goal is to help any player, be it PSP, merchant, or industry-related readership, to take informed decisions in their future endeavours in the complex ecosystem which is constantly evolving •

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Trends and Developments in Payment Methods

Introduction

This report aims to give a comprehensive summary of the trends and developments in the world of payment methods today. It addresses ongoing trends and developments per region, concerning payment methods that can be used in both an online and offline context, with a closer look at e-wallets.

This report focuses on Europe first, as it has a very diverse payment landscape, inspecting countries and regions within the EU. On top of this, PSD2 is discussed, as it will impact payments on several levels. Secondly, we examine the US, India, and China, the three largest markets in the world. The region reports will give a summary of the preferred payment methods currently in that region or country, new developments that have arisen, and a deep dive into e-wallets.

Europe

Ecommerce has been steadily growing throughout Europe for the past decade. This, in combination with economic stability, has led to increased trust of consumers towards merchants and financial institutions. Europe is one of the most diverse, but also most fragmented markets when it concerns payments. Every country has an individual unique composition of traditional and alternative payment methods. Banks have a key role in Europe regarding payment methods; according to Ecommerce Europe, banks account for more than 60% of all transactions in 2016. On top of all this, PSD2 will heavily impact the payment landscape in Europe.

PSD2 and its impact on payments methods

The landscape of payment methods in Europe is likely to change as a result of PSD2. A few impact areas can be expected.

More SEPA Credit Transfer (SCT)

More payments will be made via the regular SCT and SDD (SEPA Direct Debit) infrastructures, since it will become easier for merchants and their buyers to initiate payments online and mobile. This is facilitated by the new role of Payment Initiation Services. This role requires a specific license which is lighter than payment institutions and banking licenses. Therefore, it can be expected that new entrants (including merchants) will appear, next to incumbent PSPs and banks offering these payment initiation services. There will be more parties, but all will be offering a similar product. This development is likely to cannibalise card payments the most, as the costs and the usability of the PSD2 driven payments are expected to be competitive.

More Strong Customer Authentication

An integral part of PSD2 are the Guidelines for **Strong Customer Authentication** (SCA). This leads to more authentication with all online payments (cards, SCT, SDD, e-wallets etc) in order to minimise fraud. On the downside, there is the impact on the customer experience, because there are potentially more situations for 'drop off' from the check-out process. Conversion is coming under pressure. 'Strong' implies knowledge (e.g. TAN, passwords), inherence (e.g. finger, facial) and possession (e.g. mobile, calculators, tokens) of authentication credentials. There are exemptions foreseen, such as with recurring payments with a fixed amount, or when the amount is below EUR 30. →

Uncertainties still ahead

How payments will look like in a PSD2 world is still uncertain at this moment of writing. This is due to the pending approval of the **Regulatory Technical Standards** (RTS) by the European Parliament and the European Commission, of which the draft is still under discussion. The outcome of the RTS will define the exact user experience of Payment Initiation Service (PIS) and Account Information Service (AIS), the technical interfaces and messaging, the exemptions and (last but not least) the planning for implementation and adherence. This will be 18 months after acceptance of the RTS. Approval of the RTS is not foreseen before Q4 2017, which brings the adherence moment to Q2 2019 at the earliest.

Payment Methods in Europe

Europe has a very diversified range of payment methods, and a wealth of payment service providers that offer various solutions. The biggest e-wallets in Europe are global players. PayPal has been the most prevalent e-wallet in Europe, and seamlessly integrated into many ecommerce platforms. It also recently completely overhauled its mobile app to create a better user experience, and is expected to maintain their strong position in Europe (TechCrunch, 2016). However, other global players are expanding into Europe with rapid pace; both Apple, Samsung, and Android Pay have launched in several countries, with Google Pay following shortly. Alipay, the e-wallet associated with Alibaba, has recently gained the support of more than 900,000 merchants in Europe in order to reach Asian communities and travellers abroad (Financial Times, 2016). In Europe, the battle for market dominance is still raging. Reach remains a key challenge for all e-wallets, and drives partnerships between e-wallets; this March, for example, SEQR partnered up with MasterPass to open their e-wallet up to a wider range of merchants.

On the other hand, local initiatives to create e-wallets for specific regions and populations have been popping up around Europe: the localised approach appeals to smaller markets, often contained in one country or region. Local e-wallets are mostly backed by a bank or group of banks that cater to a specific region. However, some very successful initiatives have combined the efforts of banks and merchants to deliver more open and widely usable e-wallets, like the French Lyf Pay, created by four banks and three merchants. Some e-wallets developed from loyalty platforms that later added payment functionality, like the German PAYBACK, part of American Express which revolves completely around loyalty to merchants.

We take a closer look at the markets per region, first introducing the popular payment methods today, then relevant developments, and finally the e-wallets of the region.

United Kingdom

In-store, the British prefer to pay with cash (Ecommerce Europe, 2016). However, according to Payments UK, an independent source founded to aid the British finance world, this is likely to change; since the introduction of contactless payments with cards, there has been a dramatic increase in card usage. In ecommerce, UK consumers still widely prefer to pay by card. E-wallets are contending for their share of the market; in 2016, 23% of online transactions were made through e-wallets, 59% were made by cards, 45% debit, 14% credit (Ecommerce Europe, 2016). The UK has a reputation of being the landing ground for many international payment methods; Apple, Samsung, and Android Pay all launch in the UK as their first step into Europe. This creates a very diverse, but also very satisfied market for digital and mobile e-wallets.

Two interesting e-wallets have recently surfaced in the market: **Yoyo Wallet** and **Pay by Bank App** are taking on the global e-wallets like PayPal. Pay by Bank App was founded in 2016 by 4 of the biggest banks in the UK; Bank of Scotland, Barclays, Halifax, and Lloyds Bank. The app offers a trusted solution to customers of those banks (Business Review Europe, 2016). Yoyo Wallet, on the other hand, does not limit itself to customers of specific banks; anyone can join. Its strategy is to incorporate merchants and their loyalty schemes into their app, and thus appeal to a wide audience. It is already active in 4 countries, and received a GBP 10 million investment in 2015 to expand to the United States (Business insider, 2015). Yoyo Wallet recently closed a deal with coffee house chain Caffè Nero and Uber for integration into the Yoyo Wallet app, and received a major investment of GBP 12 million from retail giant Metro Group. Yoyo Wallet is used by 400,000 people, and is accepted by 1,700 merchants (Business Insider, 2017). In all likelihood, this investment will help Yoyo Wallet expand internationally.

Nordics

The Nordics stand out in Europe, as popularity of cards in e-commerce is low, and falling. Sweden is an exception to this, where cards still make up more than half of the online transactions. In Norway, Finland, and Denmark, however, consumers prefer invoice, online banking, and e-wallets. Cards make up 44% of payments, invoice 23%, Direct Debit 22%, and e-wallets 6% (Ecommerce Worldwide, 2017).

However, e-wallets are gaining popularity. Most notably the Danish MobilePay has been adopted by most of the Danish population (3.5 million users) and is widely accepted by merchants throughout Denmark (Business Insider, 2016). Similar e-wallets are coming up in Sweden; Swish with 5 million users (Brunet, 2017), and Norway; Vipps with 2.15 million users (Finextra, 2017). These e-wallets all started as Peer-to-Peer apps for consumers, and later grew to include other services. MobilePay, for example, now offers a wide range of loyalty programs, and options to pay bills with the app. In general, people from the Nordics are confident online consumers using a variety of alternative payment methods, and it remains to be seen if e-wallets will become bigger than online banking solutions or invoices for ecommerce purchases. However, e-wallets have a place in the market and incredibly high adoption rates among the population (Ecommerce Europe, 2017).

France

The French are avid consumers online, spending more than average on ecommerce (Ecommerce Europe, 2017). The preferred payment methods are still (local) credit and debit card, but in recent years, e-wallets have become increasingly popular, in particular the bank-backed Paylib, which already holds three times more users than PayPal in France, 40 million users, according to Ecommerce Europe.

In October 2016 Wa! and Fivory, the two electronic wallets developed respectively by BNP Paribas and Carrefour, merged and started pooling their expertise around a single app-based mobile payment solution in France. The e-wallet is intended to help meet the strategic goals of digitising commerce and making life easier for customers. Crédit Mutuel, Auchan, Mastercard, Oney and Total have also joined the project. It resembles Yoyo Wallet in this regard, as they both focus on being universally available to consumers, and add value for merchants that want to connect with their customers. \rightarrow

Germany

Germany also has a strong online consumer presence. Most ecommerce is fuelled by online banking solutions, particularly ELV, **SOFORT**, and **Giropay**. E-wallets account for 31% of transactions online, and most of those are PayPal (Ecommerce Europe, 2016). However, local e-wallets struggle to get much traction in Germany. This is evidenced by the recent failure of Yapital, and initiative by Otto Group. One viable local e-wallet seems to be PAYBACK, a loyalty scheme, owned by American Express, that has enjoyed some success among Germans, with a strong emphasis on the largest merchants in a vertical. They claim to have 29 million users in Germany, and enjoy support from more than 50 large retailers, including Ebay, ARAL and Expedia. They also launched a app for smartphones with a payment functionality, which already has been downloaded 11 million times. Another 41 per cent uses the payment function in the PAYBACK app.

Benelux

There is a strong ecommerce market in the Benelux, but the payment market is surprisingly homogeneous: in the Netherlands, online banking solution **iDEAL** makes up 56% of the transaction volume online. In Belgium and Luxemburg, cards are still prevalent (55%) (Ecommerce Europe, 2017). The consumers in the Benelux are confident in paying online with e-wallets but, like those in Germany, prefer online banking solutions and cards. However, PayPal has been gaining traction, partly due to their collaboration with mobile apps like Uber, according to Ecommerce Europe.

ING (initiator), ABN AMRO, ASN Bank, KBC bank, Rabobank, RegioBank, and SNS Bank joined forces to launch **Payconiq** in the Netherlands, a mobile wallet that is meant to appeal to a wider audience in the Benelux, who would rather trust their bank instead of a third party. In Belgium, Payconic has already launched, and ING reports that 17.000 merchants are supporting the app already.

United States

Cards and alternative payment methods

The (credit) card networks have historically dominated the US online payment space. To date, the alternative ACH payment network has seen limited adoption in US ecommerce. The two main reasons are the poor user experience (filling in bank account and routing numbers) and the high risk of bad debts, since the ACH network does not provide real time user authentication and bank account verification interfaces. Yet the US market is starting to pay more attention to online banking e-payments, as ACH has a huge potential:

- All consumers with a US checking account can pay (or be paid) by ACH, which is more consumers than those who have a debit or credit card;
- Merchants/billers pay as little as USD 0.01 per ACH transaction (instead of 2% + card processing fee).

PayWithMybank developed an online banking e-payments solutions (ACH) with simple user interface by eliminating the need to fill out payment forms (like iDeal). It is likely that more start-ups will enter this space. →

E-wallets

In 2011/2012 Starbucks and Dunkin Donuts were the first retailers to successfully introduce an e-wallet to enhance the user experience by simplifying payments and integrating this with innovative features like rewards programs, coupons, mobile order-ahead, and custom marketing.

E-wallets have proliferated over the past year, with banks (Capital One, Wells Fargo, and ChasePay) introducing proprietary e-wallets to compete with Apple, Samsung and Android Pay.

According to a study of North America Consumer Digital Payments Survey (Accenture, 2016), just 19% of consumers use an e-wallet to pay in-store. The most important reasons for slow adoption are that cash or card payments meet the needs of consumers and the slow pace of EMV migration at the point of sale. So even if consumers want to pay by smartphone, they often cannot. Other sources (First Annapolis, 2017) also quote security concerns.

Even though the growth of e-wallet users is slower than anticipated, this might change over time. As EMV migration is increasing, merchant acceptance and penetration will increase naturally, while the group of wallet-using millenniums grows.

Who will be the winner in this still nascent and fragmented market? Most likely the key words are platform independence, ubiquitous acceptance across channels, and the addition of effective loyalty programs and coupons to the offering.

India

Ecommerce boom

India is currently the fastest growing market for ecommerce in the world, with more than USD 816 billion in sales in 2016. This enormous growth has created an ever-increasing need for payment methods that are both available and convenient for Indian consumers. There are several up and coming payment methods that sweep the country; Aadhar cards, Rupay cards, and several local e-wallets have emerged for Indians without bank accounts. The Aadhar card, in combination with the Rupay card are government-issued measures to increase the banked population and develop India to be an increasingly 'cashless' society. In accordance with this plan, the government is also phasing out cash in favour of digital currency (Kapronasia, 2017).

Wallets in India

The main e-wallets in India are **Snapdeal**, **MobiKwik**, and **Paytm**. Together they make up more than half of the market for e-wallets. However, there are dozens of e-wallets that try to gain footing in the Indian market, both local and global.

Most global players find it difficult to meet the needs of Indian consumers as they are very different compared to that from the Western market: as much as 40% of people in India are underbanked or unbanked, so e-wallets that provide extra services like the functionality to pay the bills and be able to get paid with the e-wallet are far more likely to succeed. The main competitor for e-wallets is the government-developed **Unified Payment Interface (UPI)**, an online banking service that is widely available and is already successful, even though it has been introduced only recently. \rightarrow

China

Developments in alternative payments

China is currently the largest ecommerce market in the world, and has several immensely popular ecommerce platforms that offer their own payment method, often in the form of an e-wallet. Most notably Alipay, the largest e-wallet in China, is an associate of Alibaba, the largest ecommerce platform. Another e-wallet that is rapidly growing is WeChat Pay, an associate of WeChat, the social network. Currently, e-wallets account for 60% of all online transactions in China. The successful integration of financial services in a social network is being met with amazement in the West, as other social networks, like Facebook, struggle to monetize their platform due to lukewarm response from merchants and consumers alike. In China, however, WeChat Pay quickly rose through the ranks by offering P2P payments to its users, and later integrating with ecommerce.

Outside of the ecommerce dimension these e-wallets are also very popular. Like in India, consumers have no problem using alternatives to bank cards in offline contexts. This has led to the development of the QR code as the most popular proximity-based payment tool, which has flown over to India as well (Kapronasia, 2017).

The growing middle class in China leads to more Chinese tourists in the West, which in turn leads to a higher demand for mobile e-wallet acceptance with merchants that are active in tourism in Europe and America. Alipay and WeChat Pay are both rapidly gaining support from European merchants and, according to the Financial Times, this trend shows no signs of diminishing. →

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Paul Alfing | Chairman e-Payments Committee | Ecommerce Europe

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Online Payments and Ecommerce



Web Fraud Prevention & Online Authentication

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Explanation of the Payment Ecosystem

1. Evolution of the Payment Landscape

2. Explanation of Payment Methods

- a. Introduction
- b. Payment Method Categories Explained

3. Ecosystem Explained: e-wallets

- a. Introduction
- b. Overview of regional and global e-wallets in Europe, North America, India and China
- c. Mapping of e-wallet functionalities
- d. Research summary and results

The payment landscape is a complex ecosystem, being the result of a process that lasted for decades. This section describes the various domains of development of the payment landscape.

Domain 1: Electrification of payment infrastructure (1960 - onwards)

In the 1960-ties of the last century electronic computing penetrated the business and government world. Financial services, notably banking, became rapidly digitized. In the developed world people stored their cash at the bank and received an electronic balance back. Users can make payments through paper forms and plastic cards.

The foundation of electronic payments...



Source: Innopay analysis

Future of Digital Transactions - February 2017. © Innopay GmbH. All rights reserved.

These payment instruments for users, governed by banks, became largely adopted and embedded in the base infrastructure. When we refer to 'payment infrastructure' we mean the stacked foundation of electronic payments:

- 1. Instruments: standardised services towards users (payers and payees), such as card, credit transfers and direct debits.
- 2. Processing: this is also referred to as 'clearing'. When payers and payees send and receive payments their balances change and as a result the balances between the involved banks change. Clearing is 'netting' the interbank position.
- 3. Settlement: The balance of each clearing cycle is paid through the account each bank has with the central bank.

These three layers together are called the infrastructure layer. Here, the payment takes place in the sense of money moving from one account to another. As we shall see, the 'payment experience' can happen in various places within the ecosystem. Payment experience is the notion that both the payer and the payee feel their obligation within a transaction (e.g. shipment versus payment) are fulfilled. This does not always need to be concluded directly by a transaction through the infrastructure layer. A major development in the infrastructure layer is 'instant payments', consisting of many projects worldwide. Its goal is moving from a batch-oriented infrastructure to a real-time per transaction infrastructure.

Evolution of the Payment Landscape

Domain 2: Platforms 'on top of payment infrastructure (2000 - onwards)

With the advent of internet and ecommerce the need for online payments became apparent. Initially, existing payment methods such as cards, direct debit and credit transfers were used online, but the usability and security features were not optimal, as these payment services were never developed for the internet. This opened up a big opportunity for new services specifically developed for internet and directed to payers and payees, as alternative for their banking relationships within the infrastructure layer (domain 1). We call them platforms and they sit 'on top of' the banking infrastructure. This is also referred to as 'services' layer, positioned above the 'infrastructure' layer, explained in domain 1.



Payment platform 'on top of' payment infrastructure

Source: Innopay analysis

Future of Digital Transactions - February 2017. © Innopay GmbH. All rights reserved.

The link to the banking infrastructure is smartly designed by connecting accounts in the platforms through entering cards and direct debit details at the platforms. Users can fund their account and merchants can send their earnings to their bank account. This mechanism can be seen as the first generation 'access to the account' with full control by the banking customer. PayPal led the way in this category, followed by similar platforms all over the world such as Yandex (Russia) and Alipay (China). Key to the platforms' success was their ability to efficiently onboard millions of buyers and merchants, creating network effects for fast growth. Platforms are a good example where the payment experience between payers and payees happens within the platform and not per se in the infrastructure layer. This only happens when payers and payees decide to put in or pull out funds into the platform. In fact, the service's layer is all about creating a better payment experience compared to payment made directly within the infrastructure layer. \rightarrow

Domain 3: Banks reacting through online banking based online payments (since 2005)

With the new platforms on the rise some banks and banking communities adapted their online banking systems so that payers can initiate an Online Banking ePayment (OBeP) directly from the merchant's website.



Banks reacted by offering online banking e-payments (OBeP) resulting in monobank and multibank solutions

Source: Innopay analysis

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The solutions address the payers and payees directly, there is no platform in between. Two types of OBeP solutions exist: monobank and multibank. In the case of multibank solutions there is a group of banks who offer an interoperable solution, such as iDEAL, MyBank and Zelle. Merchants need to connect once, and afterwards all players of all banks can pay at this particular merchant. In a monobank situation, every bank offers its own solution and merchants must integrate separately with every OBeP solution.

Domain 4: Payment Service Providers offering simplicity to merchants (2000 - 2017)

The growing ecosystem of payment options leads to more options for merchants and buyers. For merchants to offer a full range of payment options to buyers in a growing number of geographies, they must connect with as many relevant payment options as possible. This leads to a significant amount of work in contracting, connecting and maintenance of relations with payment options. Payment Service Providers (PSP) see an opportunity to connect once to these payment methods and offer a connection themselves to merchants.



PSP adding simplicity for payee acceptance of payment methods

Source: Innopay analysis

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Through a PSP, merchants need to connect and contract only once, offering great advantage in IT and administrative investment. This also facilitates geographical growth, as many PSPs integrate with many payment methods of many countries all over the world. PSPs form an important function in the payment ecosystem at the side of merchants, because PSPs deal with fragmentation in payment options facing merchants. In 2009, PSPs became regulated under the PSD1, with the introduction of a new license type, the Payment Institution (PI), which is lighter than a full banking license. \rightarrow

Domain 5: The mobile revolution accelerating ecommerce (2007 - onwards)

With the introduction of the smartphone a new era started in which digital commerce popularised further, as 'anytime, anywhere, any device' (ATAWAD) became possible. Payments also needed to become mobile, i.e. being able to be performed on small screens and in physical locations through NFC, beacons and QR-codes.



'Mobile era is here' solution optimised for smartphones

Source: Innopay analysis

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User experience becomes even more critical, driving innovation in payment experience. Payment platforms, OBeP, banks and PSPs all offer mobile interface nowadays. \rightarrow

Domain 6: The online continents (2010 - onwards)

→

The next stage after the 'mobilisation of the internet' is the fast growth of the digital platforms for social interaction and commerce. More and more traffic and commerce take place within platforms such as Google, Amazon, Facebook, Apple, Alibaba, Taobao and Rakuten. It also means that payments are growing within these platforms. Examples are Android Pay, Apple Pay, Samsung Pay, Amazon Pay, Alipay and Facebook Payments. So far, the impact of the payment options has been limited, but it can be expected that payments within these large platforms will grow in importance, as more and more people worldwide use these platforms as their primary source of communication.

Online platforms: the continents



Source: Innopay analysis

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Domain 7: Consumer wallets

The growing complexity of the payment landscape, combined with the fintech movement, leads to ever increasing payment options for merchants and buyers. We have seen that PSPs address the merchant complexity, supported by the PSD1 regulation. For the consumer side, there is the world of wallets, of which several definitions exist. For this ecosystem, description wallets are applications which aggregate payment methods for consumers, thereby reducing the complexity for consumers.

Ecosystem 'replicated'

Payer/Payee Domain Payment **Online Platform** devices Desktop Pay Solutions ctrine Payment Payment Platform channels ᢇ 📩 РауРа/ Яндекс 🚈 Nordea 🔊 🗗 PayByLink Link Payment **INSTRUMENTS S***E***P**A VISA instruments ayer Payee Debit/ Credit card PROCESSING • SETTLEMENT

Source: Innopay analysis

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A strong analogy exists with wallets from the physical world, which hold cash, cards, loyalty programmes and receipts, all in one device, usually made from leather. Large payment providers jump on this opportunity, notably the card scheme providers such as Visa and Mastercard. A wallet is the 'cardless' version of the payment mechanism. In most cases it is a mobile app storing card credentials for the payers, which can be used easily and securely in a checkout process at merchants. There are also so-called 'independent' wallets, providers who are not a card scheme, but store credentials equally.

Cards are mostly associated with wallets, but in Europe the PSD2 regulation stimulates connectivity between third party wallet apps and online bank accounts. In 2019, we will see this happening, although there are still many challenges and uncertainties surrounding this important development •

Introduction

In order to give a complete and comprehensive overview of the subject matter in this paper, we found it appropriate to take a closer look at the various types of payment instruments and methods. For this reason, we will start with a short introduction on the terminology and difference between a payment method and a payment instrument, then all the payment methods will be individually discussed in-depth. Lastly, the various payment methods are mapped and presented by region in an infographic, the four regions being Europe, the US, Asia, and LATAM.

Online payment methods refer to the way shoppers can pay for their purchases over the Internet. An online payment method is presented at the checkout or payment page of the merchant and should have a clear recognition by the shopper through means of a well-known logo (e.g. Mastercard, PayPal, iDEAL) or common all-purpose words like 'credit cards', 'bank transfer' or 'payment-on-delivery'. Alternative payment methods refer to online payment methods that are used as an alternative to credit card payment.

Online payment methods rely on six payment instruments:

- · Card payments;
- · Bank transfer payments;
- · Direct debit payments;
- · Cash payments;
- · Cryptocurrency payments;
- · Direct carrier payments.

Normally, online payment methods refer to online payment method brands (Mastercard, Bitcoin, Boleto, Bancontact), online payment solution brands (e.g. Klarna, PayPal, Masterpass) or directly to one of the payment instruments (e.g. 'bank transfer'). In this report, we draw a clear line between the six payment instruments, the actual tools for a transaction, and payment methods, the ways in which these tools are put to use.

Each of the six payment instruments has its own local, regional, global or vertical payment ecosystem. Ecosystems are represented by a specific payment scheme which can be described as the institution that sets the governing rules and technical standards for the execution of payment transactions using one of the underlying payment instruments.

As mentioned before, online payment methods refer to the ways shoppers can pay for their purchases over the Internet. There is an endless number of payment methods to match all contexts (pay in advance, pay afterwards and payment and delivery are at the same time).

We have identified ten different payment categories. A payment method can stand in a one-to-one relationship with an instrument, as with credit cards, but it can also incorporate several payment instruments in one method, as with e-wallets (can be topped up by debit / credit card or Online Banking e-Payments).

The ten categories discerned from one another are:

1. Credit card	6. Direct debit
2. Debit card	7. Invoice – Payment after delivery – Instalments
3. Prepaid card	8. Cash (cash-on-delivery and kiosk payments)
4. E-wallet	9. Direct carrier billing
5. Online Banking	10. Cryptocurrency

Payment Method Categories Explained

Below, we will elaborate on the ten payment method categories consisting of both card-based payment methods and alternative payment methods.

Credit card

General description	Credit cards are issued to cardholders, after which a revolving account is created by the issuer, granting a line of credit to the cardholder, from which the cardholder can borrow money for payment to a merchant. For credit cards, we distinguish two different types of schemes: the three-corner model (closed and exclusive scheme, e.g. AMEX, Diners Club) and the four-corner model (open and inclusive scheme, e.g. Mastercard, Visa).
Payment instrument	Credit card
Payment guarantee	When it comes to fraud and chargebacks, credit cards offer the highest protection. At most, a cardholder is only liable for USD 50 of an unauthorized transaction. Some issuers provide zero liability cards, meaning the cardholder will be reimbursed for the full amount of the fraudulent charge.With credit card transactions, the consumer's cash reserves are not affected. While the available credit for the card may drop temporarily after the fraudulent purchase is made the cardholder is not affected much by the unauthorized
	purchase. Chargeback can be used in cases of goods not arriving at all, goods that are damaged, goods that are different from the description, or where the merchant has ceased trading. There is a time limit on chargeback claims – typically 120 days. The time at which this period of 120 days starts depends on the specific circumstances, but will usually be from the day the consumer becomes aware of a problem. Additionally, once a chargeback has been filed a refund should be credited to the account immediately.

Credit card

Brands	Mastercard, Visa, JCB, Discover & Diners Club, American Express, China Union Pay
Market reach	Credit cards are widely used internationally, and enjoy a status of being widely accepted as common payment method for ecommerce and POS. However, in Asia only 41% of online transactions are completed with a credit card. In some European countries (the Netherlands and Germany) alternative payment methods (online banking e-payments, invoice) are the dominant payment methods for ecommerce.

Debit card

General description	On top of the cards for offline payments, debit cards are also increasingly used online. Functioning in much the same way as a credit card, but without several risks of debt, the debit card has become popular in countries that drifted away from credit payments, but have no or little accessible online banking options. In several countries where online banking has rapidly developed and increased in popularity (e.g. Germany and the Netherlands), debit cards are virtually no longer used online.
Payment instrument	Debit cards are directly linked to the checking account of the buyer.
Payment guarantee	Credit cards have a maximum fraud liability of USD 50. With debit cards, that liability cap only lasts for two days. If consumers do not immediately report a lost or stolen card that has been compromised, the fraud protection decreases significantly. After two days, the liability jumps to USD 500. If consumers let two billing cycles pass, they would not be reimbursed for any of the fraudulent purchases. Additionally, the effects of fraud are felt immediately. A criminal has the ability to completely drain the consumer's bank account before the unauthorised purchases are detected. The law allows banks to take 10 days to review the claim before issuing refunds. While some banks refund the cash much sooner,
Propde	Vice Debit Debit Mastereard Maestre Dankert (DK) V RAX card DestEinance
סומוטצ	Card, Interac debit cards
Market reach	In the US, credit cards are the dominant payment method for ecommerce. In Canada, debit cards (Interac debit) are more popular.
	In Europe, online banking e-payment methods are more widely used.

Prepaid

General description	Some prepaid cards run on scheme networks such as Visa and Mastercard. These cards can be used to make purchases or withdraw cash in the same way as a debit or credit card. The key difference is that they need to be loaded up with cash in advance – the balance then operates as the spending limit. Another type of prepaid cards is the type of card or voucher consumers need to buy before starting a transaction. These cards are not usually run on
	scheme networks (such as Visa and Mastercard) and are generally authorised immediately.
	Most prepaid products have a funding limit and some do not allow multiple cards / vouchers to fund one single transaction.
Payment instrument	Cash, debit, or credit card
Payment guarantee	Payments cannot be reversed by the buyer.
Brands	paysafecard, NeoSurf, Cashu
Market reach	Prepaid cards, with their relative safety for consumers and ease-of-access for under- or unbanked people, make them a popular payment method for con- sumers in BRIC countries and underage consumers without access to a credit card.

E-wallet

General description	An e-wallet is a digital tool (software or app) for consumers to store their payment methods. It stores credentials of (among others) debit, credit cards and alternative payment methods. Some e-wallets can also store loyalty programmes. An e-wallet allows an individual to make electronic transactions with an improved checkout and payment experience compared to keying in all payment credentials every time a purchase is done. Wallets can function both in online and physical stores. Other remarks:
	 e-wallet providers can also be payment method providers, e.g. Visa and Mastercard; e-wallet providers can also be independent, e.g. Seamless / SEQR; The term 'wallet' is also often used in the situation of a stored-value account for which a license is required (e.g. e-money).
Payment instrument	Multiple payment methods can be used, depending on the e-wallet provider: credit card, debit card, gift card, online banking e-payment, direct debit.

Explanation of Payment Methods

E-wallet

Payment guarantee	The chargeback risk of an e-wallet depends on the payment instrument used to top up the e-wallet. PayPal offers consumers a protection if they are charged for goods they did not purchase or if the order did not arrive or if the order did arrive but is significantly different than it was described. Merchants are pro- tected by PayPal when selling physical goods that are sold and shipped with proof of delivery from within the US to buyers around the globe.
Brands	PayPal, Alipay, WeChat Pay, Apple Pay, Samsung Pay, Android Pay, Masterpass, Paylib, Amazon Pay, SEQR, MobilePay, Lyf Pay, Yoyo Wallet, Chase Pay, Allied Wallet, Dwolla, Paytm, MobiKwik, Pay by Bank App, PayBack
Market reach	 US/Europe: Adoption of e-wallets is slower than initial forecasts predicted. However, it is expected that their share will increase in the next 3-5 years. India: Rapidly growing market due to the conjunction of rising smartphone usage and lack of access to financial services of a large part of the population. Also, demonetization in India has proved a lucrative opportunity for e-wallet players in the country. China: For online payments, the e-wallets (particularly Alipay and WeChat Pay) are the most popular form of payment.

Online Banking e-Payment

General description	The Online Banking e-Payments (OBeP) scheme is a type of payments network designed to facilitate online bank transfers. In an OBeP scheme, the consumer is authenticated in real-time by his financial institution. The availability of funds is validated in real-time and the consumer's financial institution provides guarantee of the payment to the merchant in case the payment is made as a credit transfer (push payment): i.e. the consumer / buyer initiates the payment. The merchant receives a real-time guarantee so he can continue with the fulfilment process. The actual funds arrive later (D+1), according to the SEPA Credit Transfer Scheme.
Payment instrument	Bank transfer payments: an online bank transfer, or online wire transfer, is simply the movement of funds from one bank account to another. When happening within one bank's system (also referred to an 'on-us' transactions), this typically happens in real-time. Transfers between banks can take longer (depending on the cut-off times) and are often subject to fluctuation of speed depending on the size of the transfer.
Payment guarantee	A successful online banking-based payment is irreversible. After the bank has received the payment, the buyer cannot reverse the transfer. The merchant is not faced with a chargeback risk. Another benefit is the relatively low transaction cost compared to card, wallet, or other alternative payments.

Online Banking e-Payment

Brands	 Multi-Bank OBeP scheme – entails that a seller or Payment Service Provider has one single connection to the OBeP network in order to accept payments from any participating financial institution. Brands: iDEAL (the Netherlands) GiroPay (Germany), MyBank (EU), ePS (Austria) and Bankaxess (Norway). Overlay OBeP – third party (the overlay provider) who sits between the payment network and the consumer. The overlay provider requires the consumer to share their online banking credentials with them in order to have access to the consumer's bank account and to initiate the credit transfer to the merchant. Examples: SOFORT banking (Germany), Trustly (pan-European), PayWithMyBank (UK).
Market reach	 Europe: Online Banking e-Payments represent a significant share in the Netherlands, Germany, and Nordics. It is likely to grow across Europe due to PSD2: more payments will be done via the regular SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD) infrastructures, since it will become easier for merchants and their buyers to initiate payments online and on mobile devices. This is facilitated by the new role of Payment Initiation Services. US: The small market share of OBeP might grow with new players entering the market, providing a better user experience and less risk.
	India: A primary governing body of all retail payment systems in the country, National Payment Corporation of India (NPCI) has launched a Unified Payments Interface (UPI). The interface allows customers to make payments through a single identifier, like Aadhaar number or virtual address. UPI is an infrastructure on top of which end-user apps can build and implement the features offered by UPI. UPI enables a customer to make payments using his mobile phone as the primary device for payments, including person-to-person, person-to-merchant, and merchant-to-person with the ability to pay someone, as well as 'collect' cash from someone. UPI has huge potential; if exhausted fully, it will further promote the concept of mobile payments and also facilitate digital banking.

Direct debit

General description	There are no card scheme networks involved in the SEPA Direct Debit (SDD) Core scheme. All communication happens directly between banks. To set up payments by SDD, the payer must complete a mandate to the merchant. This mandate contains bank-approved wording that makes it clear that the payer is setting up an authorisation for the merchant to debit their account. The interface for completing the SDD instruction is controlled by the merchant, who then sends the direct debit initiation to the bank. The SDD core scheme can be used for single (one-off) or recurring direct debit collections. Direct debit offers
	used for single (one-off) or recurring direct debit collections. Direct debit offers a relatively inexpensive payment method to merchants.
Payment instrument	SEPA Direct Debit

Direct debit

Payment guarantee	The SDD Core Scheme grants payers a 'no-questions-asked' refund during the eight weeks following the debiting of a payer's account. Therefore, during this time, any funds collected by SDD Core Scheme will be credited back to the payer's account upon request. Consumers may demand a chargeback (claiming it was an unauthorised transaction) for up to 13 months after the settlement. Solution providers offering SDD based payment methods can take over the risk of default payments and chargebacks.
Brands	RatePAY, SlimPay, GoCardless, SEPA Express, NuaPay
Market reach	SDD has seen the strongest adoption in Germany, the Netherlands, Spain, and Austria. The payment method is often used for recurring payments, due to the lack of issues with credit card expiration.

Invoice / Installment

General description	We distinguish two types of invoice payments: open invoice (payment after delivery) and instalment payments (a series of payments that a buyer makes instead of a lump sum to compensate the seller).
Payment instrument	SEPA Credit Transfer, credit card, debit card (instalments)
Payment guarantee	Solution providers offering open invoices often take over the risk of collecting the payment. They guarantee payment to the merchant, either by some sort of insurance or by taking over the invoicing process. To do this they perform their own assessment of the shoppers' risk profile and accept or decline the order online.
Brands	RatePAY, Afterpay, Klarna, AcceptEmail, FuturePay, Sezzle
Market reach	Europe: Open invoice is popular in Germany, Benelux, Austria, Switzerland, and the Nordics (retail segment). In Turkey, 88% of the consumers prefer to use their credit cards instead of debit or prepaid cards to make instalments for online purchases (source: PayU).
	US: 63% of millennials (ages 18 to 29) do not have a credit card, according to a survey commissioned by Bankrate and compiled by Princeton Survey Research Associates International. Companies like Sezzle and FuturePay offer an alternative payment method to installments.

Explanation of Payment Methods

Cash

General description	We distinguish two commonly used methods of cash payments: cash-on- delivery and kiosk payments. Cash-on-delivery (COD) is a payment method in which ordered goods are carried to the buyer's place but are handed over only upon full payment.
	Kiosk payments are popular in India, LATAM, Russia, Indonesia, and Japan. Shoppers can choose this cash payment method and print a voucher or receive a reference number. With the voucher of reference number, they can pay for the item at a kiosk, cash register at a convenience store or bank branch. The kiosk notifies the merchant that the payment has been made, credits the merchants account and confirms to the merchant to ship the item.
Payment instrument	Cash
Payment guarantee	After the payment has been made and the goods are received, the buyer cannot reverse the payment via the carrier.
Brands	Boleto (Brazil), QIWI (Russia), PayNearMe (the US), Konbini (Japan), Kudo (Indonesia), Barzahlen (Germany)
Market reach	Despite an increasing influx of money into the payments ecosystem in Southeast Asia, cash-on-delivery (COD) remains the most popular payment method in emerging Southeast Asian markets. In LATAM and Russia, kiosk payments give the opportunity to make purchases to a lot of people who are in rural towns and intermediate cities, where the presence of a payment point is much more common than a bank.

Direct carrier billing

General description	Direct carrier billing can be defined as making a payment for goods or services which is charged to the customer's mobile phone account, either to the monthly bill (for customers with a contract) or as a debit from prepaid credit. Presently online purchases of digital content (games, music, video, e-books, ringtones) are the primary use case for direct carrier billing.
Payment instrument	Direct carrier billing
Payment guarantee	Payments cannot be reversed by the buyer. When a buyer fails to pay his telephone bill it is up to the telecom operator to collect the money.
Brands	DIMOCO, Bango, Fortumo, Boku
Market reach	Direct carrier billing helps merchants to monetise consumers who do not own a debit or credit card, such as the unbanked (i.e. consumers who do not have access to banks or credit unions), underbanked (i.e. consumers either having a checking or savings account, but also relying on alternative financial services) and the younger demographics.

Cryptocurrency

General description	Cryptocurrency is a digital currency in which the regulation of the amount of currency units and the verification of transactions of these units are done through cryptographic techniques. Cryptography is generally used to secure the transactions, and also to control the creation of new currencies or coins. The first cryptocurrency to be developed was Bitcoin in 2009. Nowadays, there are hundreds of other cryptocurrencies, often referred to as Altcoins, although Bitcoin is the largest cryptocurrency in both market capitalization, volume, acceptance, and notoriety.
	Bitcoin allows people to pseudo-anonymously buy goods and services over the internet. All transactions are publicly visible but the account numbers are anonymised, and are not in someone's name.
	Cryptocurrency payments happen in two ways: firstly, a transaction from one crypto-wallet to another. These transactions are made exclusively in a cryptocurrency and mostly happen B2B or C2C. Secondly, a transaction in a cryptocurrency is made to a crypto-wallet, but can be transferred into a payments account that uses an institutional currency, e.g. EUR or USD. These transactions happen mostly B2C.
Payment instrument	Cryptocurrency
Payment guarantee	Cryptocurrencies do not allow payments to be reversed because there is no third party between the sender and receiver of a payment.
Brands	Bitcoin, BitGo, coinify, BitPay
Market reach	By the beginning of 2017, it was estimated that over 150,000 merchants world- wide accepted Bitcoin, the world's most popular cryptocurrency, as one of their payment methods. This list includes major retailers like Amazon, Walmart, eBay, Expedia, Microsoft, Apple and even coffeehouse giant Starbucks. Most notably, cryptocurrencies are mostly adopted in the online gaming industry. Possible explanation: security, no chargeback risk, the (pseudo) anonymity
	factor, the immediacy of the transactions, the low-cost and evidently the adoption of the payment method among online gamers.

Infographic of Payment Methods in Europe



Infographic of Payment Methods in the United States



Infographic of Payment Methods in Asia


Infographic of Payment Methods in LATAM



Ecosystem explained: e-wallets

This report aims to inform about the ecosystem of e-wallets, both regionally and globally. Firstly, there is a brief introduction on the subject of e-wallets, followed by the methodology of the research. Finally, a summary of the research is included, in which the e-wallets are described individually by several metrics.

E-wallets

The term 'wallet' or 'e-wallet' is ill-defined. Some define an e-wallet as the digital equivalent of the 'leather wrapper' around all your cards and other content in your physical wallet. Others refer to e-wallet as being a stored-value account for e-money, a license being required for the latter.

In this report, we define an e-wallet as a digital tool (software or app) for consumers to store their payment methods. It stores credentials of (among others) debit cards, credit cards, and alternative payment methods. Some e-wallets also store loyalty programmes.

An e-wallet allows someone to make electronic transactions with an improved checkout and payment experience online, compared to keying in all payment credentials every time a purchase is done. Wallets can function in online and physical stores.

E-wallet providers

Providers of an e-wallet are:

- Banks, who connect their wallets to a bank account and cards, e.g. Chasepay in the US, Paylib in France, and MobilePay in Denmark;
- · Card schemes, offering their own e-wallet solution, e.g. Visa Checkout and Masterpass;
- Fintechs, either independently or in collaboration, that offer a wide variety of services and e-wallets, like SEQR, which tries to attract customers by offering special deals to users of the e-wallet, or Yoyo Wallet in the UK, which adds a layer of loyalty programmes to their wallet;
- **Big tech companies** that all have their own mobile e-wallets, the so-called 'Pays'; Apple Pay, Android Pay, Samsung Pay, and Google Pay. These companies have the ambition to integrate with mobile devices, but still struggle to add enough value for consumers to make the switch to mobile e-wallets;
- **Big merchants**, like Starbucks, which adds a lot of value and offer convenient payment options in their stores for adopters of their mobile e-wallets. These wallets do not expand into other stores, currently, but are very popular, especially in the US and the UK. In Asia, there is Alipay, an e-wallet belonging to Alibaba, which enjoys huge popularity throughout the continent. In China specifically, the e-wallet developed by the social networking site WeChat, WeChat Pay, is very popular due to ease of integration into the full range of transactions most people make, from groceries to paying bills.

Future of e-wallets

The e-wallet space is still a nascent and unpredictable market, new and fragmented, and no clear winners have come out on top of the scramble yet. This fragmentation also causes problems in terms of e-wallets gaining the reach they need to be a viable payment option for a large population. Additionally, there is a sharp division between the East and the West with regards to e-wallet adoption both in variety of wallets and volume of transactions. Europe and (to some extent) the US have a larger variety, but Asia has a larger consumer base using e-wallets due to high smartphone penetration, and a large group of the population which is un- or underbanked.

In physical stores, e-wallets on phones in Europe have to compete with the speed of contactless cards (which are never out of battery, either). In the US, e-wallets struggle with the lack of acceptance from merchants, compared to credit card acceptance. It is still not clear if e-wallets will ever be as big as other payment methods for ecommerce and in-store purchases, like cards. Meanwhile, e-wallets develop new features and add value at a rapid pace, and there is no telling what developments will cement their position in the financial world.

Methodology

Variables

Variable	Description
Platform: Dependent / Independent	A platform dependent e-wallet is only offered on a specific platform (e.g. Apple, Android, or Samsung). A platform independent e-wallet runs on several different devices.
Business model: Transaction- driven / Data-driven	Whether the business model of the provider is primarily based upon transactions or on data.
Scope: Payment / Payment + Marketing and Loyalty	The scope of a company is based on how broad the services that they offer are. In this paper, we distinguish between companies that only provide payment services, and companies that also provide marketing and loyalty services.
Context: In-store / Online and Mobile / Bills / Print and TV	The context in which a consumer can pay with the e-wallet. Whether this is only in store, or online or mobile, whether they can pay returning payments, and if they can purchase products from print, like flyers, or television.
Proximity / Remote	Whether an e-wallet offers proximity payments (in-store), remote payments (online), or both.
P2P / C2B	Whether an e-wallet offers peer-to-peer payments, customer-to-business payments, or both.
Backing	Whether an e-wallet is backed by a merchant, bank, fintech, big tech, government, or a combination of these institutions.

Ecosystem Explained: e-wallets

Variable	Description
Instruments	The type of payment methods that can be stored by a consumer in the e-wallet.
Head office	Country wherein the head office of the company is located.
Scale: Global / Regional	Whether the e-wallet operates on a global or regional scale. This is dependent on the number of countries in which an e-wallet is active, but also the adoption rate among the population in these countries, i.e. being available in several countries does not automatically classify an e-wallet as 'global'.
Transaction Volume	The reported user count, transaction count, or transaction volume for an e-wallet in a year. The publication date of the used source is mentioned.
Founded	The year in which the e-wallet was founded.

Disclaimer

The results of our research have all been based on a combination of desk research conducted by our editors and the input of our partners, most notably Innopay and Kapronasia. As thorough as our researchers are, however, some variables remain hard to distinguish and much information is hard to verify. Reports of transaction volume are in particular often incomplete, unavailable, or self-reported on part of the e-wallet provider.

Overview of regional and global e-wallets in Europe, North America, India and China



Mapping of e-wallet functionalities



Research summary and results

Company	Platform	Business Model	Scope	Context	Proximity/ Remote	P2P/C2B	Backing	Head office	Scale	Transaction Volume	Instruments	Website	Founded
Aadhaar Pay App	Independent	Transaction- driven	1) Payment	3) Bills	Prox	C2B	Government	India	Regional	N/A	Bank Debit	https://aadharpaymentapp.org	2017
AirtelMoney	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Rem	P2P+C2B	FinTech	India	Regional	15 Mln users	Bank Debit, Credit Card, Debit Card	http://www.airtel.in/money/	2012
AliPay	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Merchant	China	Global	USD 3 Tln (2016)	Bank Debit, Credit Card, Debit Card	https://global.alipay.com	2004
Allied Wallet	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	C2B	FinTech	UK	Global	110> Mln users (2016)	Bank Debit, Credit Card, Debit Card, Cash	https://www.alliedwallet.com/e-wallet/	2002
Amazon Pay	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	C2B	Merchant	US	Global	N/A	Bank Debit, Credit Card, Debit Card	https://pay.amazon.com/uk/	2007
Android Pay	Specific	Data-driven	1) Payment	2) Online, Mobile	Prox+Rem	P2P+C2B	Big tech	US	Global	USD 102 Bln (2016)	Credit Card, Debit Card	https://www.android.com/pay/	2015
Apple Pay	Specific	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	P2P+C2B	Big tech	US	Global	N/A	Credit Card, Debit Card	http://www.apple.com/apple-pay/	2014
Baidu Wallet	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Rem+Prox	P2P+C2B	FinTech	China	Regional	100 Mln users	Bank Debit, Credit Card, Debit Card	http://www.baidu.com/	
BHIM app	Independent	Transaction- driven	1) Payment	3) Bills	Prox+Rem	P2P+C2B	Government	India	Regional	19 Mln users	Bank Debit	https://bhimappdownload.com	2016
Capital One Wallet	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Bank	US	Regional	N/A	Bank Debit	https://www.capitalone.com/ applications/mobile/wallet/	
CashClub Wallet (Everi)	Independent	Data-driven	2) Loyalty & Marketing	1) In-Store	Rem	C2B	FinTech	US	Global	N/A	Credit Card, Debit Card	http://www.everi.com/payments/	1991
CashU	Independent	Transaction- driven	1) Payment	3) Bills	Rem	C2B	FinTech	Dubai	Regional	2.3 Min users (2016)	Bank Debit, Credit Card, Debit Card, Cash	https://www.cashu.com/	2002
Chasepay	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	US	Regional	N/A	Bank Debit	https://www.chase.com/digital/digital- payments/chase-pay	
Chillr	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	Bank	India	Regional	N/A	Bank Debit	https://chillr.com/	2013
Dwolla	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Rem	C2B	FinTech	US	Global	3 Bln transactions (2015)	Bank Debit	https://www.dwolla.com/	2008
Fastcheckout (Multisafepay)	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	C2B	FinTech	The Netherlands	Regional	N/A	Bank Debit, Credit Card, Debit Card	https://www.multisafepay.com/ fastcheckout-payments/	2000
Freecharge (Snapdeal)	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	FinTech	India	Regional	10 Mln users (2016)	Bank Debit, Credit Card, Debit Card	https://www.freecharge.in/	2010

Ecosystem Wallets Explained

Google Wallet	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Big tech	US	Regional	N/A	Bank Debit, Credit Card, Debit Card	https://www.google.com/wallet/	2011
ICICI Pockets	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	India	Global	N/A	Bank Debit, Credit Card, Debit Card	https://www.icicibank.com/Personal- Banking/insta-banking/internet-banking/ pockets/index.html	2015
LevelUp	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	FinTech	US	Regional	1 Mln users (2016)	Bank Debit, Credit Card, Debit Card, Cash	https://www.thelevelup.com/	2008
Lyf pay	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank/ Merchant	France	Regional	N/A	Bank Debit, Credit Card	https://www.lyf.eu/fr/	2013
MasterPass	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	US	Global	N/A	Credit Card, Debit Card	http://www.masterpass.com	2013
Mobikwik	Independent	Data-driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	FinTech	India	Regional	USD 700 Mln (2015)	Bank Debit, Credit Card, Debit Card, Cash	https://www.mobikwik.com/	2009
Mobilepay	Independent	Data-driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	Bank	Denmark	Regional	>3.5 Mln users (2017)	Bank Debit, Credit Card	https://mobilepay.dk/da-dk/Pages/ mobilepay.aspx	2013
Momoe (Shopclues.com)	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox	C2B	FinTech	India	Regional	N/A	Bank Debit, Credit Card	https://www.momoe.in/	2014
NETeller	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	C2B	FinTech	UK	Global	N/A	Bank Debit, Credit Card, Debit Card	https://www.neteller.com/en	1999
Omnyway	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	FinTech	US	Regional	N/A	Credit Card, Debit Card	http://www.omnypay.net/	2014
OneCard (Bandar Utama)	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Merchant	Saudi Arabia	Regional	N/A	Bank Debit, Credit Card, Debit Card, Cash	https://www.onecard.net/customer/ index.html?siteLanguage=en	2004
Oxigen Wallet	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	FinTech	India	Regional	20 Mln users (2017)	Bank Debit, Credit Card, Debit Card	https://www.oxigenwallet.com	2004
Pay by Bank App (Zapp)	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	C2B	Bank	UK	Regional	N/a	Bank Dedit	https://paybybankapp.co.uk/	2013
Payback (American Express)	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Bank	Germany	Regional	29 Mln users	Credit Card, Debit Card	https://www.payback.net	2000
Payconiq	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	The Netherlands	Regional	N/A	Bank Debit, Credit Card	https://www.payconiq.com	2015
Paylib	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	C2B	Bank	France	Regional	40 Mln users	Bank Debit, Credit Card, Debit Card	https://www.paylib.fr/	2010
PayPal	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	FinTech	US	Global	USD 354 Bln (2016)	Bank Debit, Credit Card, Debit Card	https://www.paypal.com	1998
PayTM Wallet (PayTM)	Independent	Transaction- driven	2) Loyalty & Marketing	3) Bills	Prox+Rem	P2P+C2B	FinTech	India	Regional	122 Mln users	Bank Debit, Credit Card, Debit Card	https://paytm.com/	2010

Ecosystem Wallets Explained

PayUMoney	Independent	Transaction- driven	1) Payment	3) Bills	Rem	P2P+C2B	FinTech	India	Regional	USD 6 Bln (2015)	Bank Debit, Credit Card, Debit Card	https://www.payumoney.com/	2011
Payza	Specific	Data-driven	1) Payment	2) Online, Mobile	Rem	P2P+C2B	FinTech	UK	Global	N/A	Bank Debit, Credit Card, Debit Card, Cryptocurrency	https://www.payza.com/	2012
PayZapp (HDFC)	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	P2P+C2B	Bank	India	Regional	8 Mln users	Bank Debit, Credit Card, Debit Card	http://www.hdfcbank.com/personal/ making-payments/pay-with-payzapp/ payzapp	2015
SamsungPay	Specific	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Big tech	South Korea	Global	USD 75 Bln (2016)	Bank Debit, Credit Card, Debit Card	http://www.samsung.com/us/samsung- pay/	2015
SEQR (Seamless)	Independent	Data-driven	2) Loyalty & Marketing	4) Print, TV	Prox+Rem	P2P+C2B	FinTech	Sweden	Global	5.3 Bln transactions (2016)	Bank Debit	https://www.seqr.com/nl/	2001
Skrill Wallet	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	P2P+C2B	FinTech	UK	Global	36 Mln users (2016)	Bank Debit, Credit Card, Debit Card	https://www.skrill.com/	2001
Starbucks Card	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Merchant	US	Global	11 Mln users (2016)	Credit Card, Debit Card, Cash	https://www.starbucks.com/card	
State Bank Buddy	Independent	Data-driven	2) Loyalty & Marketing	3) Bills	Rem	P2P+C2B	Bank	India	Regional	10.6 Mln users (2017)	Bank Debit, Credit Card, Debit Card	https://www.sbi.co.in/buddy/#page1	2014
Swish	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	Sweden	Regional	5 Mln users (2016)	Bank Debit	https://www.getswish.se	2012
Vipps	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Rem	P2P+C2B	Bank	Norway	Regional	2,4 Mln users (2017)	Credit Card, Debit Card	https://www.vipps.no/	2015
Visa Checkout	Independent	Transaction- driven	2) Loyalty & Marketing	2) Online, Mobile	Rem	C2B	Bank	US	Global	> 7 Mln users (2016)	Credit Card, Debit Card	https://usa.visa.com/pay-with-visa/visa- checkout.html	2014
Visa Qiwi Wallet (Qiwi)	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	P2P+C2B	Bank	Russia	Regional	11 Mln users (2015)	Bank Debit, Credit Card, Debit Card, Cash	https://qiwi.com/	2008
Walmart Pay	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	Merchant	US	Regional	20 Mln users (2016)	Credit Card, Debit Card	https://www.walmart.com/cp/walmart- pay/3205993	
WebMoney	Independent	Transaction- driven	1) Payment	3) Bills	Rem	P2P+C2B	FinTech	Russia	Global	31 Mln users (2016)	Bank Debit, Credit Card, Debit Card	https://www.webmoney.ru/eng/	1988
WeChat Pay	Independent	Transaction- driven	1) Payment	2) Online, Mobile	Prox+Rem	P2P+C2B	FinTech	China	Global	300 Mln users (2016)	Bank Debit	https://pay.weixin.qq.com/index.php/ public/wechatpay	2013
Wells-Fargo Wallet	Specific	Transaction- driven	2) Loyalty & Marketing	1) In-store	Prox	C2B	Bank	US	Regional	N/A	Debit Card, Credit Card	https://www.wellsfargo.com/mobile- payments/wells-fargo-wallet/	
Yandex.Money	Independent	Transaction- driven	1) Payment	3) Bills	Prox+Rem	P2P+C2B	FinTech	Russia	Global	30 Mln users (2017)	Bank Debit, Credit Card, Debit card, Direct Carrier, Cash	https://money.yandex.ru/new	2002
Yoyo Wallet	Independent	Data-driven	2) Loyalty & Marketing	2) Online, Mobile	Prox+Rem	C2B	FinTech	UK	Regional	1.2 MIn transactions (2015)	Bank Debit, Credit Card, Debit Card	http://yoyowallet.com/	2013

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Insights from Payment Methods Solution Providers

Trustly

The State of Online Banking 2017

How likely are you to change banks in the next six months? How satisfied are you with your bank? To what extent do you trust banks to conduct money transfers safely?

To better understand the state of online banking in Europe and how we can expect it to evolve in the coming years, Swedish online banking payments company Trustly, in partnership with Nepa, asked these questions and many more to 7,000 people across seven major European markets. The main thing the markets – France, Germany, Italy, the Netherlands, Spain, Sweden and the UK – have in common is high online banking penetration, which ranges from 87% to 97%. But as our survey shows, habits differ greatly between markets.

The results were eye-opening and will push those in the banking and fintech industry to examine their strategies more closely. Below we highlight four key takeaways from the study, but readers can also view the full survey and compare markets at www.thestateofonlinebanking.com.

Online banking habits differ greatly between markets

In general, most respondents had bank accounts at one to two banks. For example, 50% of respondents in Spain had more than one bank, while just 26% of respondents in France had more than one bank. But how they use their main bank was more telling. Managing investments and funds in a main bank is much more common in Sweden than in other countries studied (22% in Sweden versus 6% in the Netherlands). When it comes to paying bills online, the split is even more drastic: 86% of Germans respondents reported paying their bills online while in France and Spain that number drops to 37% and 43%, respectively.

People are generally satisfied with the authentication methods offered by their online bank

Across the board, Europeans are happy with their digital authentication methods used to log into their banks or sign a payment. However, it is interesting to note that respondents in Sweden are overwhelmingly satisfied with BankID, the country's leading electronic identification. In fact, on a scale of one to seven with seven being very satisfied, 60% of users rated it a seven and 94% of users rated it five or above.

For those unfamiliar with BankID, it is a standardised authentication method and mobile app that was developed by the country's largest banks and today is used by roughly 7.5 million of the country's 10 million people. Once you have registered for and downloaded the app, you can log into accounts, sign documents and even file your taxes using your unique 6-or-more digit code.

Swedes' high satisfaction score speaks to the method's simplicity and convenience, and its rapid adoption speaks to Swedes' willingness to adopt new financial technologies. It is logical to predict that if other countries follow suit in developing a standardised authentication method, satisfaction ratings would improve even more.

In general, Europeans are satisfied with and have trust in their main bank, but there are some regional differences



The Netherlands takes the lead with both the highest satisfaction with main banks (88%) and highest trust in main banks (86%). It is followed by the UK, Italy, Germany, Spain, France and Sweden. Surprisingly, Sweden has both the lowest satisfaction with main banks (77%) and lowest trust in main banks (79%), despite being a very financially mature country.

Trustly

Still, its scores are nothing to scoff at. It is also worth noting that people's trust in their main bank is overall higher than trust in banks in general, which makes sense because people keep their money where they believe it to be safest.

Despite high satisfaction and trust ratings, churn is variable

How likely is it that you will switch your bank in the coming 6 months? (population)



You would think that high satisfaction with and high trust in main banks would equal lower churn rates, but our survey shows that this is not always the case. Sweden, for example, had the lowest satisfaction and trust among the surveyed countries, yet its respondents were the least likely to change banks in the coming six months: only 13% of respondents in Sweden said they were likely to change banks. In contrast, 24% of respondents in France and 23% of respondents in Italy reported being likely to change banks in the coming six months, both of which had higher trust and satisfaction ratings than Sweden.

Interested in gleaning more insights? View the full survey and compare markets at **www.thestateofonlinebanking.com**





Kim Sandström Market Intelligence Manager Trustly

About Kim Sandström: Kim Sandström is the Market Intelligence Manager at Trustly and previously held analyst and consumer marketing positions at strategy / business development consulting firm Mediavision and Bonnier. Kim is passionate about consumer insights and fintech innovation and has a background in marketing.

About Trustly: Trustly is a Swedish fintech company that makes online banking payments fast, simple and secure. Today, we cover 29 European countries and our B2B payment solutions attract global merchants in four main segments: e¬commerce, travel, financial services and online gaming. In 2016, we processed EUR 3.2 billion in payments and today we process more than 2.2 million monthly payments.

www.trustly.com



Trustly

Type of payment method	OBeP (Online Banking e-Payments)
Active since	2008
Operational Area	Europe, 29 countries (national and cross-border)
Industries	Merchants within ecommerce, financial services, gaming, travel
How it works	Trustly provides merchants with direct online banking payments across Europe. Through Trustly's platform payments are initiated and reconciled with support for closed loop automated refunds, currency handling and settlements. The product is safe and convenient for consumers and eliminates risk, fraud and cash management operations issues for merchants. The user interface can be integrated into the merchant's webpage and visiting consumers can pay from their local bank, on any device. No learning of new behaviour, sign up or download required.
Potential reach	Pan-European coverage, 28 EU markets + Norway
Market Share	Per country
Acceptance	All European consumers with an online bank account in any of the supported banks
Chargeback Risk	No
Facts	For more information please contact the company
Settlement currency	EUR, GBP, SEK, DKK, NOK, PLN, HUF, BGN, CZK, RON
Processing currrency	EUR, GBP, SEK, DKK, NOK, PLN, HUF, BGN, CZK, RON
Currency available for consumer	EUR, GBP, SEK, DKK, NOK, PLN, HUF, BGN, CZK, RON
Transaction volume	21 million transactions 2016
Implementation requirements (non technical)	Local entity and bank account within the EEA required
Reconciliation	One statement for all transactions, settlements, banks, markets etc.
Pricing	For more information please contact the company
Channels (POS/ecommerce)	Ecommerce

For the complete company profile please click here

MobilePay

Changing old habits and behaviours towards mobile payments in P2B is a crucial challenge for MobilePay expansion into the Nordics

What was the driving factor that led to the founding of MobilePay? How was it adopted by the public?

MobilePay was launched in 2013 based on the conviction that easy payments via smartphones were to become a fast growing financial channel with huge possibilities within both P2P and P2B payments and related value added services. From the start, MobilePay was designed to be available to the entire Danish population, not just for Danske Bank customers. Public adoption was overwhelming from day one, and MobilePay is currently present on more than nine out of ten smartphones in the country. **A recent survey** shows that MobilePay, in June 2017, managed to finally gain the position as the most popular app in Denmark, Facebook being second best.

What kind of features are needed to convince consumers and merchants to use and accept mobile wallets?

In our view, a winning mobile wallet needs a strong end-user appeal, a substantial ecosystem consisting of end-users, businesses and partners and multiple features to cover all of the users' payment needs. MobilePay started out as a Danish P2P solution, but after just one year, we had sufficient volume to introduce a simple solution for mainly smaller shops. Later, we introduced features, such as: faster solutions for supermarkets and larger chains, an NGO donation solution with automatic tax deduction, mcommerce and ecommerce solutions and a solution for recurring payments. Besides all these payment features, the wallet contains up to six credit/debit cards plus value adding services, such as digital receipts and loyalty cards.

MobilePay is also expanding into the Nordics; what are the key challenges and successes so far?

MobilePay launched in Norway in 2015. However, DNB, the largest national bank in Norway, managed to launch an app a few weeks before that; in many aspects, it was similar to the MobilePay app. We believe in universal wallets assisting users in multiple scenarios - whether they wish to pay in supermarkets, online or donating to an NGO.

This proved to be a wise move on their part since it has made it difficult for MobilePay to grow as successfully in Norway as in Denmark despite MobilePay's strong business solution portfolio. In Finland, the challenge has been a much slower adoption of mobile payments in general. However, this is rapidly changing. Especially, within the online payments solution, MobilePay is now gaining traction with more than 8.000 Finnish web shops offering MobilePay Online. In Sweden, ten banks, including Danske Bank, decided to create a common sector solution called Swish, which is mainly a P2P solution and highly successful. For this reason, MobilePay is not present in Sweden. That being said, a consolidation across the underlying infrastructures in the Nordics seems like a natural and sensible future move in order to enhance the user acceptance of mobile payments, strengthen the banks' value proposition further by making payments across borders possible for both P2P and P2B. →

MobilePay lifespan transactions in Denmark



MobilePay

What were the biggest challenges in gaining a footing in Denmark, and how will you adapt your strategy to suit the rest of the Nordics?

As a first mover with a broadly appealing solution, it was quite easy to expand P2P in Denmark. The challenge is how to change old habits and behaviours towards mobile payments in P2B. Based on experience, we know that if you can present a new and significant better offering, then it is possible to change habits quite fast. Few months after the Danish national rail company implemented our mcommerce solution two out of three customers bought their ticket via MobilePay. We will continue to improve our in-store solutions since the aspiration for MobilePay is to be present as a payment method wherever there is a payment need (physical shops, vending, ecommerce and mcommerce etc.) thereby becoming the reference platform in the Nordic. This goes for both Denmark, Norway and Finland, even though MobilePay is progressing the most in Denmark. The ambition is to be the leading mobile payment solution in the Nordics.

With bigtech and fintech entering the mobile wallet market in Europe, how can banks stay the first choice for customers?

A bank has a strong starting point as the most important financial institution in the life of the customers. In order to continue being the first choice for customer payments, banks must develop a disruptive innovation culture and massive scale in their markets. Cooperating closely across banks and countries is necessary in order to achieve this scale. In addition, banks should also seek innovative partnerships with relevant fintechs



Bo Tolstrup Christensen Head of Concepts and Innovation MobilePay

MobilePay

About Bo Tolstrup Christensen: Bo Tolstrup Christensen, Head of Concepts and Innovation, MobilePay is responsible for transferring ideas to new solutions securing that MobilePay stays the leading wallet in the Nordic. The DNA of MobilePay is innovation in a constant dialogue with users and merchants.

About MobilePay: MobilePay is a digital wallet covering all the users' payment needs. The solution includes payments to friends, smaller physical shops, supermarkets and larger chains, recurring payments, ecommerce and mcommerce and donations. MobilePay is present in Denmark, Finland and Norway and has an ambition of being the leading Nordic mobile payments solution.

www.mobilepay.dk



MobilePay

Type of payment method	Mobile payments wallet
Active since	2013
Operational Area	Denmark, Norway and Finland
How it works	End-users can transfer or receive money by using each other's phone numbers. Depending on the business need MobilePay Business utilises phone number, QR or BLE. At large retailers MobilePay is integrated to the POS (point-of-sale) terminal enabling payment from a locked screen by accepting the amount with a swipe. For larger amounts, PIN is required.
Potential reach	4,0 million active private users in Denmark, Finland and Norway, 3,5 million of which in Denmark.
Market Share	Close to 100% in Denmark. Not known in Finland and Norway.
Acceptance	There are +58.000 merchants offering MobilePay including web shops, approx 45.000 of which are in Denmark.
Chargeback Risk	For more information contact the company.
Facts	MobilePay is the most widely-used wallet in the Nordic with 4,0 million users and 58.000 merchants. In Denmark alone, the solution is expected to surpass 220 million transactions in 2017.
Settlement currency	Only local currency. Daughter app WeShare can handle multiple currencies.
Processing currrency	Only local currency. Daughter app WeShare can handle multiple currencies.
Currency available for consumer	Only local currency. Daughter app WeShare can handle multiple currencies.
Transaction volume	Expected volume in Denmark 2017 around EUR 7 billion.
Implementation requirements (non technical)	In order to be able to pay with MobilePay, a user must download the app and register with a credit or debit card, inform about your phone number, and social security number or a higher level of identification. Small shops only need to download MobilePay MyShop app whereas app owners and subscription businesses will integrate to MobilePay's APIs.
Reconciliation	For more information contact the company.
Pricing	Free for private users. Fee structure for businesses based on volume and ticket size.
Ownership and partners	MobilePay is owned by Danske Bank Group. Since autumn 2016, the platform was opened up and Nordic banks were invited to join the MobilePay platform as distribution partners. So far +70 Danish banks have decided to do so.

Samsung Pay Europe

Beyond the Mobile Payments Horizon with Samsung Pay

Throughout the ages, since the earliest bartering of grains and livestock and the introduction of coins and paper notes, mankind has always needed a simple and convenient system for buying and selling goods. Fast forward to the 21st century and the advancement of technology has taken the payments ecosystem to a completely new level. One crucial element of this evolution is the increased complexity of the transactions we make – online and offline. This can open up multiple new ways to pay for things, increasing the ease for the consumer but it can also lead to issues as some existing payment methods have not lived up yet to the rapidly changing consumer demands. Cash won't buy you that pair of shoes you have found online.

Our purses and wallets have also expanded over time as we carry multiple payment cards, loyalty and gift cards, cash, and paper vouchers for the myriad offers and discounts from our favourite merchants.

In parallel, another evolution has taken place in the world of communication, and more recently, telecommunication. Whilst consumers are often keen to leave their over-sized purse or wallet at home, they certainly do not leave home without their mobile device. These devices have rapidly increased in capability and functionality, enabling mobile wallets to emerge and address the payments complexity.

Say hello to Samsung Pay

We launched Samsung Pay with the goal of enabling consumers across the globe to make payments that are simple, secure and accepted almost anywhere. Since launching the service in South Korea in July 2015, Samsung Pay has completed over 240 million transactions, and helped us expand our vision into building a complete digital wallet solution.

Our innovative approach has transformed Samsung Pay into a holistic service and software platform that upgrades individuals' wallets and integrates with a connected ecosystem of devices, services and solutions across Samsung and beyond. We are working hard to put core infrastructure services like Samsung Pay across various personal devices to enable tightly integrated experiences that simplify the payment process and make consumers' everyday life ever more seamless.



Global momentum and expansion

Samsung Pay is now live in 18 markets across the world, and our focus is not just on building a payment service, but rather a digital wallet with several value-added services, tailored to each market. In addition to mobile payments, we have introduced a variety of additional benefits such as transportation cards, deals and rewards, membership and loyalty cards in markets across the world. Samsung Pay also launched the service on its wearable device, the Samsung Gear S3, making payments even more convenient for consumers.

One of the key features that has supported this global expansion plan is MST (Magnetic Secure Transmission), which makes Samsung Pay compatible with magnetic stripe terminals. This means that – with the addition of NFC – Samsung Pay is the only mobile payment solution that works almost anywhere you can swipe or tap a card today.

Convenience in commerce – connected devices

In a quest for more convenience, consumers look to their smartphones, wearables and even larger devices like TVs and cars to make purchases. The vision of Samsung Pay is to expand beyond simple mobile payments and the traditional boundaries of a mobile payment app – striving to provide additional value, connections, services and accessibility.

Samsung Pay Europe

As a leading manufacturer of consumer electronics, we help shape the future of connected devices in many ways across our product portfolio. For instance, our Family Hub fridge allows consumers to see inside from wherever they are, thanks to its three built-in cameras, helping them to see exactly what they need to buy from the store on their way home.

In the future, a connected car has the potential to make our lives easier: coins will no longer be needed for that parking ticket, with number plate recognition at the car park entrance and exit combining with Samsung Pay in-car to make the process seamless. The ingredients for all of this are already there – the job is simply to connect the dots.

Further ahead, the driverless car could make the vehicle of the future another commerce and media opportunity and Samsung has invested in this area through the acquisition of HARMAN. We see transformative opportunities in the car – and a future which seamlessly connects lifestyle across automotive, home, mobile and work ●



Laurence Stock Head of Merchants and Value Added Services Samsung Pay Europe

SAMSUNG

pay

About Laurence Stock: Laurence Stock is responsible for value-added services strategy and merchant relationships for the Samsung Pay proposition in Europe. Laurence was previously at Aimia, latterly as Nectar Client Services Director. He also helped launch Nectar Italia, and worked on loyalty projects in the Middle East and Asia.

About Samsung Pay Europe: Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearables, digital appliances and network systems. Samsung Pay is a mobile payment service that is simple, safe and available almost anywhere you can tap your card.

www.samsung.com



Mastercard

Mastercard innovates in an age of digitalised cards for a more convenient shopping experience

Since there has been a lot of technological developments lately, what does innovation stand for in the payments industry?

Innovation can take several forms. For me, innovating in payments means combining new user services with a very strong security proposition, embedded in a smooth user experience. There will be different solutions for face-to-face payments, remote payments, and other situations. I believe that the parties that will truly innovate and scale up will not be so numerous because consumers do not want many payment methods. They really just want three or four.

The ones that will be adopted are the ones that combine a smooth user experience (before and after you pay as well) and a great service that adds value. Sometimes, too many steps are required to register for a payment service and people stop the process. The players that will succeed must combine a great service with a great user experience, ensure a high degree of security and have a wide distribution network. You can have a great value proposition but you have to make sure it reaches the end-users, which is not easy.

In this respect, banks and retailers, as well as the digital giants, such as Apple and Facebook, who can distribute their new solutions quickly, have an advantage versus small startups for whom such distribution can be more challenging. So, innovation will come from those who can combine this value proposition with a good distribution capability.

How do you perceive the present and the future situation of the ongoing battle between alternative payment methods and credit cards?

I think that it will be a battle on three levels. First, there is the user interface. If I use five apps on a regular basis, which one will I use for payments? So, it will be important for the parties to

66 The future of cards is digital.

distribute these apps according to the customer's needs (banks, fintechs, startups, Apple, Google, digital giants).

Secondly, inside this app, you have a payment mechanism. This can be a bank account, a card payment or a closed-loop payment.

Finally, you have another layer which is the network used to transfer the money. There will be more competition in this space. Mastercard has its network for authorization, clearing and settlement and there are local ACH networks and processors. There will be competition on all three levels.

What about the cards market in a future perspective?

The future of cards is digital. Actually, we already have millions of digitised cards on the Mastercard network. We already have them in bank payment apps, Apple Pay, Android Pay, Samsung Pay etc. Together with our bank partners, we are progressing fast.

At some point, this digitisation will become the norm: if you issue a plastic Mastercard card, you should also issue its digital counterpart (we call it a token). For mobile payments, you have the digital equivalent to make payments with your smartphone. Your mobile banking app becomes the control centre for all your cards and all your payments. You can check all the transactions you have made with your plastic and digital cards, you can (de-) activate cards, pay in instalments etc. In the same app, you could make a bank transfer (regular transfer) without a card, only using the IBAN. You could also send money simply by using your mobile phone number as an alias without knowing your card number or the IBAN. So cards will prevail but so will ACH infrastructure. There will be a coexistence. It is mainly cash that will be displaced by these new solutions. →

Mastercard

Will the plastic card be on the market in a few years from now?

Some people think that plastic cards will disappear in a few years from now. First of all, in a physical world you still need them to make a payment: in Europe, for example, contactless payments for low-value payments is very quick and efficient. In the London Underground, using a card is often faster than using your mobile phone. So the user experience can still be better with plastic than with your phone.

But the digitisation of cards allows us not having to stick to a piece of plastic. We can have different digital cards stored in different devices and this is very important for the future of payments. We have started digitising cards for smartphones either in a bank app or in Apple Pay, Samsung Pay, Android Pay and so on. But we will digitise cards in other devices as well. We work with car manufacturers as they want to embed services, possibly including payments, in their cars. To sum up, I think there will be a coexistence of plastic and its digital counterpart, each fitting different intents and purposes.

How do you secure your digital counterpart of the payment card? When we generate a digital card stored in a smartphone we make sure that the card number is connected to that specific device. If someone would capture the card number and try to make a payment with the same details from another device, it would be declined because we check if the payment comes from that specific phone. For a consumer, this is very reassuring because if he loses his phone he can block this individual digital card and does not have to block and renew his physical bank card •



David Dechamps Senior Vice President, Digital Payments & Labs for Europe

mastercard

About David Dechamps: David Dechamps is Senior Vice President, Digital Payments & Labs for Europe. In this role, he is responsible for the management and development of emerging payment products for the European markets. These include ecommerce, mobile commerce, person-toperson payments, contactless payments and In Control.

Mastercard

About Mastercard: Mastercard is a technology company in the global payments industry. We operate the world's fastest payments processing network, connecting consumers, financial institutions, merchants, governments and businesses in more than 210 countries and territories. Mastercard products and solutions make everyday commerce activities – such as shopping, traveling, running a business and managing finances – easier, more secure and more efficient for everyone.

www.mastercard.com





Building Better Commerce

Merchant Risk Council

The MRC provides year-round support and education to members by offering access to proprietary benchmarking reports, whitepapers, presentations and webinars. The MRC hosts four annual conferences in the US and Europe, as well as regional networking meetings for professionals to build better business connections, exchange best practices and share emerging trends.

Building Better Commerce Fraud & Payments Profession MRC MEMBERS EXPERIENCE

29% LESS FRAUD AND HIGHER CONVERSION RATES THAN NON-MEMBERS.

ASK US HOW!



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Integration of Payment Methods

How Local Payments Can Unlock the Door to Global Success

Ecommerce merchants expanding into a new market must be able to accept local payments – or risk rejection by consumers

Global cross-border ecommerce is growing by 25% every year. That is twice the rate of domestic ecommerce. Analysts expect this trend to continue until at least 2020 (**Hot growth predicted for cross-border e-commerce**, *Supply Chain Quarterly*, 6 February 2017). Barriers to cross-border trade are shrinking all the time and in many non-Western markets demand is booming.

However, as in every boom market, there are losers as well as winners and the difference between the two, more often than not, is localisation. Ensuring that your site is properly localised can boost conversion rates by up to 70% (Localisation Increases Conversion by an Average of 70%, *Translate Media*, 23 May 2013). What is often missed, however, is the need to support locally preferred payment methods. In many cases, that is an omission with serious consequences.

Why alternative payments are the new normal

Each market has its own mix of preferred payment products. Ecommerce operators from Western Europe and North America often are not familiar with these alternative payment methods (APMs).

APMs are, loosely speaking, any payment method that is not an internationally accepted payment card. Globally, around 50% of all online purchases are made with APMs. APMs around the world include real-time bank transfers, e-wallets, local cards, payment apps, prepaid vouchers, cash payments for online purchases and payments via ATM machines, SMS or phone calls – to name just a few.

How did we get here?

Payments are this diverse mainly for historical reasons. Ecommerce emerged in the mid-to-late 90s and really took off in the early 2000s. At that time, even within the European Union much less the world as a whole — there was no effective single market in either ecommerce or payments. People wanted to shop online, businesses wanted to accept payments online.

In Anglo-Saxon markets, in which credit-card use was already widespread, the market took the path of least resistance, and adopted payment cards as the default means of online payment. In many other markets, in which cards did not enjoy the same degree of acceptance, the first service to effectively and securely allow people to pay and take payments became the market standard. For example, in the Netherlands, the real-time bank-transfer service iDEAL – which emerged in 2005 – now has a 56% market share. Along with other players, such as Germany's SOFORT, this makes real-time bank transfers the single most common alternative online payment type in most countries.

Local culture also plays a part in determining which payment methods a market will accept. In countries with a long-standing aversion to debt – for example, Germany –, credit cards have struggled to find mass acceptance. Political considerations also play a part. For instance, in Italy, the government has long encouraged the use of electronic payments and card payments – despite a cultural preference for cash – because it is harder to use traceable electronic payments to launder money.

Nor should we assume that this process has now stopped, leaving established payment cultures static and merchants with plenty of time to work out strategies for cracking each individual market. Developments such as the establishment of the Single Euro Payments Area (SEPA) mean that payment cultures are constantly subjected to new pressures, leading to further developments. →



PPRO

What this means for global commerce

No one entering a new market can afford to ignore how most of their potential customers in that market like to pay. According to a recent research by PPRO, 47% of online shoppers have abandoned a purchase at checkout, with over 60% saying they did so either because their preferred payment type was not available or the payment process was too complicated. Failure to offer locally preferred payment methods risks alienating large portions of your audience.

To expand successfully, PSPs must support their merchants with a range of locally preferred payment methods and should not expect this to be a static, one-off task. The payment industry is continually developing. PSPs and their merchants must be able to keep up to date with what is happening in each market, and to react quickly when a new payment method arrives on the scene or achieves critical mass.

For small-to medium-sized operators, the best way to do this may well be to work with marketplaces such as AliExpress and Amazon. This provides the retailer with sales, fulfilment, and local payment means in every market in which they expand. For larger merchants, wishing to set up their own localised sites, the answer is a trusted partner such as a payment service provider, able to aggregate and make available APMs in all major markets.

To help businesses expand cross-border, PPRO has prepared its Global Payments Almanac. The product of thousands of hours of research, the almanac covers payment methods worldwide and gives unique insights into the payment culture and infrastructure in all major and many minor ecommerce markets worldwide. The complete almanac is available only to PPRO partners. But you can download our latest **ecommerce and payments report** on high-growth markets on our website ●



Ralf Ohlhausen Business Development Director PPRO Group

About Ralf Ohlhausen: Ralf Ohlhausen, MSc in Mathematics and Master of Telecommunications Business, has over 25 years of experience in ecommerce, financial services, mobile telecommunications and IT. At PPRO, Ralf is responsible for increasing PPRO's global reach, focusing on the addition of new payment choices to the company's portfolio.

About PPRO Group: Cross-border e-payment specialist since 2006, PPRO Group (PPRO) removes the complexity of international ecommerce payments by acquiring, collecting and processing a range of alternative payment methods for Payment Service Providers under one contract, through one platform and one integration. PPRO supports international payment in over 100 countries.

www.ppro.com

For the complete company profile please click here



ACI Worldwide

Connected Consumer Lifestyles Will Drive Mobile Payments

Who is in charge? What drives mobile payments innovation?

Merchants are striving to respond to the ever-changing behaviours and expectations of consumers by creating seamless purchasing experiences that engage customers and keep them returning for more. In turn, payment service providers (PSPs) and technology vendors are endeavouring to meet the needs of those merchants by providing appropriate supporting technology and services.

Within the world of merchant payments, mobile is dramatically altering the landscape. Recent research from ACI Worldwide and Edgar, Dunn & Company indicates that merchants recognise this shift in the payments outlook, with 48% of those surveyed already using mobile wallets (expected to rise to 77% within 12 months) and 59% viewing the use of in-app payments in-store as a major factor that will impact the retail industry.

To provide the best support to merchants, PSPs cannot afford to merely be reactive to the growth and changes in mobile payments, but should try to anticipate changes and develop solution sets accordingly.

The motivation for mobile

The ways that mobile devices are used around the world to shop and to make payments are hugely diverse – just like the people that use them. This can make it difficult for merchants and payment providers to determine which route to take when devising a mobile payments roadmap.

Ultimately, though, consumers care about solving their own real-world problems, and not about the novelty value of mobile solutions. This should be the single most important point of focus for any mobile payments strategy.

At a broad level, convenience, speed and security are vital to consumers who lead busy lives and often want to conduct transactions 'on the go'. Mobile payments – whether in the form of mobile wallets, mPOS or in-app payments – deliver against these consumer 'must-haves', naturally driving adoption as they gravitate towards the payment methods that fit best with their lifestyles.

To give a more specific example, emerging markets are a high growth area for mobile payments. With limited banking and payments infrastructure in many of these markets, mobile offers consumers a much-needed way to transact, and with rapidlyincreasing smartphone penetration in these markets these devices already play an important role in the day-to-day lives of the average consumer.

A more granular example (though from a mature market) is the city of Saarbruecken in Germany, which has seen a 45% increase in revenue generated at parking lots after mobile-apps for parking tickets were introduced alongside traditional coin-based ticket machines. In this case, the mobile payments capability solves the problem of drivers who don't always have spare change on them, and those who might need to extend their parking ticket without the hassle of returning to their car.

This illustrates how important it is for merchants and payment providers to think more about pairing mobile payments with lifestyle issues – to solve real pain points for consumers. That calls for more user-led research and development, rather than productled payment solutions.

Delivering solutions that meet consumer demand

Rather than forging ahead in developing and deploying brand new technology that supports completely new mobile payment methods, it could be more advantageous for payment providers to step back and explore whether certain lifestyle use cases can actually be matched with the dominant payment method in each sector and geography. This could be the key to unlocking strong mobile payments: focusing more on mobile use cases than on mobile payment schemes. In some cases, traditional payment instruments leveraged by service apps could potentially be more impactful than adding more payment methods. →

ACI Worldwide

However, staying ahead of the mobile payments curve will require agility and responsiveness when developing solutions. From a technology standpoint, open payments infrastructure allows merchants to respond to consumer demand fast, deploying new payment tools quickly and without extensive redevelopment costs.

There is certainly going to be a major advantage to first-movers as smartphone adoption continues to increase and mobile payments infrastructure develops, but there is also a need to continue supporting older technologies in parallel, at least for the foreseeable future.

Partnering for success

Since mobile use cases and 'lifestyle issues' vary significantly across geographies, it is important to localise mobile payment solutions. This requires taking into account the regulations, data protection laws, pricing quirks and consumer preferences in each market. This is not an easy task and it is the reason that even the largest vendors and solution providers are working with partners at a global level to leverage shared market expertise.

Beyond the challenges of regional market nuances, partnerships among payment providers can act as a broader foundation for successful mobile payments growth and innovation; supporting speed to market, simplified relationships and more comprehensive solutions that allow merchants to readily adapt to consumer demand.

For merchants, this means seeking out vendors who have open technology and a well-thought out partner network which underpins that technology with powerful local insights and market access. For payment providers, this may mean partnering with companies they may have traditionally considered competitors – to better meet the needs of merchants and their customers, and to effectively support the growth of mobile payments as a whole.

Reach us to learn more about how to optimize mobile payments solutions for different geographies and regions •



John Gessau Director of Product Management ACI Worldwide

UNIVERSAL PAYMENTS

About John Gessau: John Gessau is Director of Product Management at ACI Worldwide, with specific responsibility for mobile payments. John's focus is on enabling ACI's merchant customers to accept and integrate mobile payments into their in-store, mobile app and browser channels. Prior to this John was responsible for ACI's mobile banking solutions for retail and commercial banking.

About ACI Worldwide: ACI Worldwide, the Universal Payments (UP) company, delivers real-time, any-to-any payments capabilities and enables the industry's most complete omni-channel payments experience. ACI's UP eCommerce Payments solution enables payment service providers, ISOs, acquirers, ISVs, VARs, and merchants to outsource payment transaction processing to a white label partner or integrate a gateway-to-gateway solution.

www.aciworldwide.com

For the complete company profile please click here

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PAYMENT METHODS REPORT 2017 . INTEGRATION OF PAYMENT METHODS

Emergent Payments

The Paypers sat down with Emergent Payments to discuss their history, goal and to give valuable advice to merchants looking to expand to new markets.

Could you introduce us to Emergent Payments and the leadership that founded it?

Emergent Payments is in the business of delivering optimised payment solutions in high growth markets. They help merchants and partners in regions like India, SE Asia, and Latin America, where there are large digital consumer bases but significant payment complexity.

We are a technology-heavy business with deep merchant-side experience in international payments, which allows us to optimise performance in those markets for our customers. The leadership team has a strong technology and payments DNA. Founded by Mitchell Davis, a serial tech entrepreneur, the core team includes Rossini Zumwalt, CPO former head of payments at Symantec; Abhishek Banerjee, CTO from Symantec and Western Union Digital; and Joe Podulka, CFO from EBAY/PayPal. We are also proud of the fact that the majority of our 32 engineers also have a merchant payments background. That ensures our platform is driven by the needs of large scale merchants, with methods that are truly optimised, and we can deliver the service levels and attention that they need.

What motivated you to start Emergent Payments?

Globally, e-payments are approaching USD 3 trillion, but with growth slowing in the US, Europe, the Middle East and Africa, there is a lot of attention on the high growth markets where merchants can grow their businesses. Those are complex payment markets in terms of method mix, regulations, tax, optimisation, and fraud/ chargebacks. They are also underserved by the industry. So we saw an opportunity to deliver a comprehensive solution with a single technology platform that solved for those markets and made it easy for our merchant partners to build a strong revenue line there.

Because we have a merchant background and have operated in those high growth markets for years, we had a strong sense of what is needed in the solution to deliver optimal service and

66 In emerging markets, it is critical to offer consumers local payment methods.

performance. I think it is important for our customers to get high level service and experienced strategic advice on how best to build their business in markets like India, Brazil, Mexico, Malaysia, et al.



For which type of merchants do the emergent markets provide the most opportunities?

Merchants generally start their payment expansion in North America and Europe. As merchants extend their product and service offerings to their customers beyond the major markets, Emergent Payments is well positioned to introduce solutions for markets that brings added growth to the merchants' overall business. Especially digital merchants (security, healthcare, education, software, etc.) have tremendous opportunities in the emergent markets. We recommend payment methods that compliment merchants' product and service and delivers best customer user experience.

What challenges do merchants face when expanding into emerging markets?

In emerging markets, it is critical to offer consumers local payment methods. Local payment methods are only available to companies domiciled in these markets. The merchant will require expertise to manage regulations, tax compliance, funds repatriation, and how to effectively operate the local payment methods. \rightarrow

Emergent Payments

How do you differentiate yourselves from the pack? What are you doing differently that makes you successful?

Emergent Payments approaches merchant interaction in an advisory and consultative manner. We like to think that we are part of the merchant's extended payments team. We start by understanding the merchant's problem, and then collaborate on options to consider. For example, for certain recurring transactions, we would not recommend payment methods such as cash or bank transfers.



Lastly, could you provide us with an example of your process of helping a merchant to become successful in an emerging market, like India or Latin America?

The process is different for each merchant. We arrive at the merchant's office to discuss their use cases, their challenges and then offer them solutions. Many merchants already have done their own research in the market, such as India, and want to validate the challenges and the reality in setting up Emergent Payments India.

Consumers have moved away from cash-on-delivery in favor of local cards, online banking, digital wallets and UPI transactions. Cards come first for digital purchases with 60% market share. There are 750 million local cards in India with the majority not activated for cross-border use. Check out our market collateral for more deep insight on India •



Rossini Zumwalt Chief Payment Officer Emergent Payments

About Rossini Zumwalt: Ms. Zumwalt, Chief Payment Officer, Palo Alto, California, served as Senior Director of Worldwide e-Commerce Payment & Risk Strategy at Symantec Corporation. She set the strategy and direction for the global payment and risk teams to enable growth of the B2C, B2B and Enterprise commerce business units. She supported Norton's USD 2 billion online business through direct development of payment gateways, risk technology, compliance policy and fraud detection capabilities.

About Emergent Payments: Emergent Payments delivers a total global and local payments solution for international markets. With a focus on digital ecommerce for the fast-moving game industry, they serve merchants across industries including digital entertainment, games, software, services, mobile, education, and electronics. Their solutions help companies do business in emerging markets like Latin America, Asia, India and Eastern Europe.

www.emergentpayments.net





dLocal

dLocal enables global ecommerce merchants to accept hundreds of locally-relevant payment methods in Latin America and other emerging markets.

Why is it important for ecommerce companies to offer alternative payment methods in Latin American markets?

Accepting alternative payment methods is key to unlock the full potential in Latin America and other emerging markets where penetration of credit cards remains low.

At **USD 23 billion** in online annual transactions, Brazil is the largest ecommerce market and the strongest economy in Latin America. Yet, only 32% of Brazilians have credit cards. In Mexico, the second largest economy in LATAM, only **18% of adults have access to credit cards** Argentina and Chile hover around 28%, while Colombia and Peru are around 13% for credit card penetration.

The continent's reliance on alternative payment instruments is well documented. Bank transfers, cash vouchers and local cards – that is how consumers pay for their rent, phone bills, and utilities. That is also how most of them pay for online services and goods purchased on regional ecommerce websites such as OLX, TiendaMia, and MercadoLibre. Because these payment methods are the norm in LATAM, at dLocal, we refer to them as *locallyrelevant payment methods*.

By offering all the locally-relevant payment methods, merchants can reach all the potential buyers in Latin American markets rather than just a fraction of them.

What are the types of credit cards in Latin America and how do they differ from instalments?

In Latin America, there are three categories of credit cards – international, regional, and local. Some of these cards are branded as Visa or Mastercard, however, they come with a different set of restrictions.

6 By offering all the locally-relevant payment methods, merchants can reach all the potential buyers in Latin American markets.

Local credit cards are issued by the local banks and are the most accessible to the local population. They are provisioned for domestic transactions in the country and are not enabled for international or cross-border purchases. As such, they cannot be used for online purchases on international ecommerce websites.

Regional cards are similar to local cards, with the exception that they are enabled for use in several neighbouring countries where the issuing bank has a presence. Thus, local consumers can also use them on regional ecommerce purchases.

International cards are the least restrictive and can be used anywhere in the world, as well as for online purchases from international merchants. However, only a sliver of the population has access to international credit cards – typically, the most affluent. In Brazil, for example, only 20% of consumers have international credit cards.

Even the privileged few who carry international cards are selective about how and where they use them. One of the reasons is that international cards carry a variety of fees such as monthly maintenance and subscription fee, as well as fees on international transactions and additional VAT that applies to the fee itself. Another reason is that cross-border purchases of physical or digital goods are often considered as imports by the local authorities, and as such, are subjected to additional fees and taxes. In Brazil, for example, there is the IOF – a 6.38% tax that is automatically added to the person's card statement for all cross-border transactions. In Uruguay, consumers can import up to four packages annually with the cost of goods not exceeding USD 200 for each package; otherwise, they will be charged a 60% import tax.

In general, people in Latin America are not relying on credit cards for day-to-day expenses and instead preserve their credit limits for big purchases such as appliances, renovations, or emergencies. Low credit lines and high interest rates are two of the main reasons for this. \rightarrow

d·local

dLocal

→ Instalments are a much more popular alternative for accessing the credit line on credit cards issued by the local banks. They are facilitated by the local banks in agreement with local merchants and are offered to consumers at the point of purchase allowing them to choose the number of payments they desire – typically, from 2 to 12. Instalments carry low interest rates, often much lower than inflation or the credit card's APR (annual percentage rate). During many promotional periods, they carry no interest at all, which makes them very popular. LATAM consumers buy their clothes, groceries, and even restaurant meals with instalments.

How can international merchants achieve high conversion rates in Latin America?

Achieving high conversion rates in LATAM is possible but it requires work. Many of dLocal's merchant customers grew their conversions above 80% by implementing the following best practices:

- 1. Process in local currency whenever possible.
- 2. Maximise reach by accepting most if not all the locally-relevant payment options.
- Connect to multiple acquirers in each country and implement routing engines to route each transaction through the best converting processor based on factors such as card BIN, card brand, token, currency, or processor.
- 4. Ensure your system can direct shoppers to pay with a bank transfer or a cash voucher when their card is declined.
- 5. Minimise the number of intermediary connections. Direct connections to local acquirers always win.
- 6. Implement detailed, unified reporting across all markets.
- 7. Optimise payment pages and checkout flows for mobile.
- 8. Become an expert in local payment landscape or find a trusted partner who has the expertise, the local acquirer relationships, and the technology stack designed to handle the many nuances that are unique to Latin America and other emerging markets •



Sebastián Kanovich Chief Executive Officer dLocal

About Sebastián Kanovich: Sebastián Kanovich is the Chief Executive Officer at dLocal. He spun off dLocal from AstroPay in January 2016, creating a payments technology company, which eliminates operational hurdles that hinder ecommerce expansion into emerging markets. As the CEO of AstroPay, he grew the company into a premier payment-card provider that processed millions of transactions daily.

About dLocal: dLocal is the only 360 payments technology platform designed to handle mass online payments in emerging markets. With dLocal, global merchants have no need to manage separate pay in and payout processors, set-up local entities, integrate dozens of isolated payment methods, or worry about stranded funds overseas.

www.dlocal.com



Type of payment method	Alternative and local payments in emerging markets including online, mobile, and offline. Payins and payouts.
Active since	2008
Operational Area	Latin America, Asia Pacific, Middle East, Eastern Europe
Industries	Auction, online media, gaming and entertainment, marketplaces, online retail and ecommerce, travel, education, online advertising, sharing economy platforms, telecom, hosting
How it works	dLocal operates as both the payment processor and the merchant of record in 18 emerging markets. The company works directly with central banks and local acquirers to process the payments locally, then remitts the funds to the metchant in EU or US.
Potential reach	2 billion people
Market Share	This information is not yet available.
Acceptance	200+ local payment methods including international credit cards, local credit and debit cards, pre-paid cards, bank transfers, cash payments, e-wallets, cash on delivery.
Chargeback Risk	<1%
Facts	Headquartered in Montevideo, Uruguay. Regional offices in the US (San Francisco, CA), Brazil (Curitiba), Israel (Tel Aviv), the UK (London), and Malta. Local offices in each country where we process payments. EU e-money and payment institution license. 450 global merchants rely on dLocal to process payins and payouts.
Settlement currency	USD, EUR, GBP
Processing currrency	EUR, BRL, CNY, HKD, ARS, PEN, CLP, COP, MXN, UYU, INR, PLN, HUF, CZK, TRY
Currency available for consumer	EUR, BRL, CNY, HKD, ARS, PEN, CLP, COP, MXN, UYU, INR, PLN, HUF, CZK, TRY
Transaction volume	Not shared publicly
Implementation requirements (non technical)	Settlement in EU and the US. Flexible integration options for PCI and non PCI merchants. Legal review of the merchant for KYC and AML.
Reconciliation	Standard data fields include: creation date, approved date, cancellation date, payment reference ID, merchant invoice ID, description, country, payment method, credit/ debit card brand, local currency amount, USD amount, fee, status, user account, user document ID, user email, user name.
Pricing	Transactional model with flexible options based on volumes, markets, and payment method requirements. For more information, please contact sales@dlocal.com.

For the complete company profile please click here

DOCOMO Digital

New Business Opportunities for Merchants with more Alternative Payment Methods

Alternative payment methods offer is crucial for checkout conversion

As the global ecommerce landscape is more and more complex so the consumer preferences vary by demographic, country and the product or service they would like to buy.

According to **Statista "E-commerce worldwide 2016"**, in 2016, only 31% of online worldwide shoppers used credit cards for their online purchases, which meant that 61% of customers did not use credit cards. These data together with a limited choice of payment methods suggest merchants might easily lose a significant percentage of purchases at the checkout. DOCOMO Digital understands these major roadblocks for all merchants and offers an alternative to traditional payment providers, from acquisition to conversion at checkout, to support merchants around the globe to increase their online sales.

Alternative Payment Methods



The mobile age of ecommerce

Ecommerce has seen a spectacular surge recently due to purchases initiated and completed on mobile devices, so it is also the time to look at payment industry from a different perspective. In this respect, DOCOMO Digital brings together key ecosystem partners to unlock new opportunities for everyone. It is crucial for every global business to understand how customers prefer to pay in order to offer them the most appropriate payment mix for each ecommerce business. DOCOMO Digital combines talent, technology and creativity to enable its merchant customers and its carrier partners to create value through connected commerce. DOCOMO Digital is a Japanese company so it is building up the business on its Japanese heritage. In Japan, direct carrier billing is the most popular payment method reaching more than 50% of online transactions, therefore the company offers solutions that connect commerce for people around the world. Concretely, DOCOMO Digital works with merchants and service providers to enhance customer experience and conversion across connected devices while leveraging on marketing, payment and financial services combined with carrier data and billing capabilities. DOCOMO Digital offers a connecting platform that covers the entire ecommerce value chain and eliminates the need for multiple integrations, tools, and interfaces. With its one-API approach for a single integration to access all local and global APMs through only one contract and one settlement as well as its full operations management service, the company helps merchants to scale up cross-border sales and to grow internationally, especially for European merchants with ecommerce businesses in Japan. We work with our merchant customers to help them achieve maximum performance in quality conversion by removing friction throughout the sign-up, shopping and checkout processes across all connected channels with our KYC, VAT management, payment and financial services. We work with our carrier partners to shape their connected commerce vision and strategy all the way through to designing, deploying and operating technology, payments and marketing solutions driving unprecedented value. Our connected platform covers the entire ecommerce value chain and eliminates the need for multiple integrations, tools, and interfaces. Our one-API approach enables a smooth single integration to access all local and global APMs with only one contract and one settlement, as well as through our full operations management service, we help merchants to scale up cross-border sales and to grow internationally.

Merchants benefits

- Acquire new customers thanks to DOCOMO Digital Marketing Solutions and offer them a wide variety of payment options;
- Increase conversion by offering customers their preferred payment method, including alternative payment methods, global and local schemes and direct carrier billing;
- Drive costs down as alternative payment methods are more cost-effective to process than cards in some markets. →

DOCOMO Digital

docomo digital

Global expertise for mobile merchants



Digital marketing: Customer centricity empowers merchants to target the right customer with the right channel and right message, at the right time. Also it helps them to align around a strategy that will drive long-term value to the business: acquiring high-value customers and keeping them coming back.

Payment facilitator: One single implementation to access a full services smart solution dedicated to boost ecommerce business, including cash management, settlement and invoicing, split payments and payout engine, compliance and regulatory coverage.

Financial services: One contract accepting all payment methods including open invoice and instalment payments, no risk and guaranteed payouts, international rollout, settlement, invoicing and VAT management.

E-wallet services: Passported e-money license UE coverage, white label e-wallet platform, reversed wallets for split / group payments, marketplace ready.

KYC and risk check: Based on data sources collected at shop level, accurate decisional rules engine, real-time scoring and risk exposure.

Direct carrier billing: Digital goods, ticketing (transportation, events, parking) in supported markets in Europe, physical goods in specific territories



Hiroyuki Sato CEO DOCOMO Digital

About Hiroyuki Sato: A 25-year NTT Group and NTT DOCOMO veteran, with over seven years of global business management and M&A experience, Sato-san leads DOCOMO Digital with his ambitious vision to enable next-generation mobilecentric digital commerce in the global market.

About DOCOMO Digital: DOCOMO Digital is an innovative payments solutions provider. With over 15 years of experience building and safely operating the world's most advanced mobile commerce environment, works to encourage financial inclusion for consumers, merchants, corporations and governments worldwide. It aims to connect five billion mobile users by 2020 by developing next-generation mobile commerce solutions for global and local merchants. DOCOMO Digital's platforms are connected to over 200 mobile network operators and 300 global and local payment methods, processing more than EUR 3 billion worth of transactions per year.

www.docomodigital.com



DOCOMO Digital

Type of payment method	All Payment Methods available including Carrier Billing
Active since	2009
Operational Area	Worldwide
Industries	Retail, travel, marketplace, ticketing, transport, fashion, furniture, consumer electronics, food and beverage
How it works	
Potential reach	N/A
Market Share	N/A
Acceptance	N/A
Chargeback Risk	N/A
Facts	
Settlement currency	All currencies
Processing currrency	All currencies
Currency available for consumer	All currencies
Transaction volume	EUR 3 billion per year
Implementation requirements (non technical)	
Reconciliation	
Pricing	Pricing is releted to merchants monthly volume

For the complete company profile please click here



MPE 2017 Revealed Alternative Payment Methods (APMs) Outrun Credit Cards Globally!

Ron Kalifa, Vice Chairman, Worldpay, presented Key Online Payment Trends at MPE2017, the ONLY European event focused on merchant payment acceptance in Berlin, Feb 14:

Digital payments is a large, global and fast-growing market



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Dave Birch: "Ron Kalifa made me think: since "ALTERNATIVE" PAYMENTS are 51% of global e-commerce, we really need a NEW WORD for them!"



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The Way of the Wallet in the US

The first mobile wallet designed for general usage was Apple Pay and it was announced in October 2014. Android Pay, Google's entry, was launched about eight months later, and Samsung Pay was launched in September 2015. That is less than three years ago so it is fair to say that the wallet category is still nascent.

There has been criticism that wallet adoption is slow and, when compared with other technologies that might be the case. As of January 2017, only 19% of US consumers who owned smartphones with a mobile wallet capability had actually loaded a payment product into their wallets so that they could actually buy something.

Usage is increasing, particularly with millennials, and wallet adoption with retailers focused on rapid throughput such as Quick Service Restaurants (QSRs) like Taco Bell and Starbucks has proven to be a highly successful approach. However, there are several reasons why adoption and usage of general-purpose wallets is progressing at a fairly leisure pace, again, when compared to implementation of other technologies.

Customer behaviour

Paying for goods and services with a plastic card at the pointof-sale is deeply ingrained in our in-store behaviour set. The challenge with mobile wallet adoption is that habits are hard to break and unless you are completely glued to your phone, as many millennials are, there is no immediate reward for customers to change their behaviour and begin to use a mobile wallet.

Near Field Communication penetration

All three major wallets rely on Near Field Communication (NFC) to enable contactless transactions and NFC is one of the capabilities included in the EMV terminals that are being installed by retailers in the US. EMV conversion is making progress although not all merchants have converted at this time. And implementation of NFC means that the merchant enables the capability and is willing to accept NFC transactions.

With limited usage, many merchants are taking a "wait and see" attitude, further slowing implementation. It is entirely possible that by 2020 only about 6 in 10 EMV capable terminals in the US will be NFC accepting.



If a customer can only use their mobile wallet in six out of ten places whereas they can use their credit / debit card virtually everywhere, new habit creation as described above is at its best, difficult.

Wallet proliferation

While Apple, Android and Samsung are trying to build traction and achieve critical mass with their wallets, US retail banks and merchants have begun to offer their own wallets. JPMC, Wells Fargo, Capital One, and Citi among others have developed their own wallet platforms. Aside from Chase whose Chase Pay is QR-code based, most bank wallets are following the NFC path, and they are integrating their wallet into their mobile banking solution. Since nearly all of the banks that offer these proprietary wallets are also offering Apple Pay and Android Pay to their customers, they add dissonance to the ecosystem at a time when consumers are struggling with the whole concept. →



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Retailers are following a very different approach. Their "wallet" is generally an ingredient in their shopping app, providing the customer with incentives and rewards along with real-time offers in-store along with payment functionality. For instance, Kohl's, a department store in the US, has incorporated a wallet / payment function into the Kohl's app which also delivers promotions and loyalty capabilities to their customers. The payment function is being provided by OmnyWay, a white-label wallet provider. Walmart has also developed a wallet function that is built into its shopping app, but since Walmart offers no promotional pricing or loyalty scheme, it is unclear if the offering can generate enough value as a standalone payment vehicle to support a change in customer behaviour toward the wallet. The integrated payment approach is gaining popularity and, while it reinforces the concept of mobile payments in store, it also adds confusion to an already confusing environment.

In spite of these challenges, mobile wallets will achieve critical mass and take their place alongside other payment vehicles in the US payments ecosystem. There will be no absolute "winners" in the US wallet wars, general purpose, bank and retail specific wallets will all steadily grow over time. It is likely that Apple Pay, Android Pay and Samsung Pay will happily coexist with their retail bank counterparts and retailers will add value to their shopping apps by embedding payments as an ingredient. But, how exactly and how fast the space will evolve is not certain yet. It is going to be an interesting ride •



Thad Peterson Senior Analyst Aite Group

About Thad Peterson: Thad Peterson is a senior analyst with Aite Group, focusing on the evolution of the payment space, the customer payment experience, and merchant acquiring. Prior to joining Aite Group, Thad led the mobile commerce practice at inCode Consulting and was managing director of Maritz Real-Time Rewards.

About Aite Group: Aite Group is an independent research and advisory firm focused on business, technology, and regulatory issues and their impact on the financial services industry. With expertise in banking, payments, wealth management, capital markets, and insurance, Aite Group's analysts work with clients as partner, advisor, and catalyst.

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Digitization of Payments takes Centre Stage in India

India possesses one of the leading IT sectors globally. Several Indian companies are leading providers of technology services and products so expertise in information technology is almost taken for granted in the country. But this does not mean it has been able to translate these capabilities into the requirements of the fintech space to the same degree. There has been a lot of interest in fintech, blockchain and digital payments in India but all these companies are not yet seen as industry leaders in these fields.

However, one recent development in India brought to the fore the country among the emerging markets of the region. In November 2016, the Indian government outlawed the use of 500 and 1000 rupees notes, replacing these with new 500 and 2000 rupees notes as legal tender in the next few months. This measure took 86% of the cash out of circulation overnight. The digital payment providers who were slowly expanding their footprint in the market became indispensable to the tech-savvy consumers in the economy. Most of the leading payment apps and wallets registered sharp rises in their transaction volumes as people looked for alternatives to physical cash payments. Bank-led apps also experienced similar growth. In addition to higher volumes, the payment services providers also began making higher investments to improve their services.

Timing is critical

While demonetization has played an important part, it is just one piece of the entire jigsaw. A lot of others have fallen into place simultaneously. Technology innovation is at an all-time high in the financial services sector. In India, this is illustrated by the efforts of the government and the central bank to build the electronic payments infrastructure under the auspices of the National Payments Corporation of India (NPCI). The organisation oversees the entire financial payments infrastructure, including that involving banks, corporates and individuals. NPCI has been working on the Unique Payments Interface (UPI) as part of its strategy to bring digital payments innovation to India. That is why the UPI would be the backbone on which all financial transactions would be undertaken. Another important aspect of this change is the significant role of the unique biometric ID being provided to all Indian residents, called Aadhaar. Nearly 90% of the Indian population has been touched by the initiative, with over a billion IDs having been generated. The Aadhaar ID can be used as the basis for all financial transactions by citizens using bank accounts, mobile payment apps and mobile wallets. For example, the Aadhaar Pay app would allow an individual to connect all their bank accounts to a single ID. They can then go to a retail merchant and use only their thumbprint or iris scan to access all their accounts and choose the one from which to make the payment.

Aadhaar ID can also form the basis for payments made through other apps and service providers that use the ID as a means of identification. Besides retail payments, payment of taxes and government subsidies (C2G and G2C) also becomes simpler and more efficient with Aadhaar, saving the government millions of dollars.

An important effort is the BharatQR code initiative developed through a partnership between the NPCI, Mastercard and Visa. This will allow merchants to display just one QR code for all QR-based digital payments for cost savings and efficiency gains.

Influence of leading global fintech and ecommerce players

Some Chinese companies have been leaders in the ecommerce and digital payments space for some time. Alibaba, for example, has invested in both payments and ecommerce industries in India for several reasons. The first one relates to the significant opportunity the Indian market represents: the second largest population in the world. Another reason is the maturing approach of the Chinese investors. In addition to looking for strategic opportunities to invest, they are also looking for financial opportunities that would allow them to secure high returns. On their part, the Indian companies are not just interested in receiving investment from their Chinese counterparts. →

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→ The similarities of the two markets help the Indian companies to learn from their Chinese counterparts. The Chinese investment into the Indian payments and ecommerce space represents only 1-2% of the overall foreign direct investment into the Indian economy and yet it is significant in its timing, expertise and knowledge that it brings.

Hence, demonetisation provided impetus to an economy that was primed for digitization in financial services, especially the payments space. Aadhaar ID is also expected to play an important part, along with some of the NPCI initiatives such as Bharat QR. Against this backdrop, the entry and investment of Chinese investors have created fertile conditions for the Indian digital payments industry to prosper and grow. We believe that it has significant potential and will expand into other emerging markets as it seeks further avenues to remain globally competitive ●



Anshuman Jaswal Director, Capital Markets and Head of Indian Financial Services Kapronasia

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About Anshuman Jaswal: Dr. Anshuman Jaswal is Director, Capital Markets and Head of Indian Financial Services at Kapronasia. He has extensive research and consulting experience, and has written more than 100 reports on a variety of topics in financial services.

About Kapronasia: Kapronasia is a leading independent research and consulting company focused on the Asian financial services industry. We help financial institutions, technology vendors, consultancies and private equity companies understand the impact of business, technology, and regulatory issues on the banking, payments, insurance and the capital markets.

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China – Consumers and Payment Providers seek QR codes for payments

Almost a decade ago, it seemed that the future of mobile payments in China was NFC. Major telco providers and China UnionPay had coalesced around a number of NFC-based mobile payment solutions and, by 2010, were running pilot implementations around the country. China Mobile partnered with China UnionPay to create Union Mobile Pay, a payment system designed to work across the China UnionPay network with phones on the China Mobile network using NFC technology.

Even though the industry reached an agreement on NFC standards in December 2012, which should have opened the market, the use of the technology for mobile payments is still limited. Despite the nearly perfect match of China UnionPay's merchants with China Mobile's consumers, even Union Mobile Pay failed to grab significant market share. NFC faced many of the same teething challenges in China that it faced elsewhere around the world: poor device interoperability, conflicting technology standards, and unclear customer/data ownership.

Around the same time, in early 2010, a wave of quick-response of QR code startups emerged in China. A QR code consists of black squares of varying sizes and positions arranged in a square grid on a white background. The code can be read by an imaging device such as a phone camera or a simple handscanner. Inspired by the popularity of QR codes in Japan and South Korea, these startups offered solutions for location check-in, item identification and tracking, and social marketing. QR codes also started appearing on advertisements on public transport in big cities, and in stores and restaurants. By scanning a QR code, a user could join a virtual queue, access groupbuying deals, marketing campaigns, or add a new contact on social media.

Although Alipay and Tencent were making inroads into online payments and remote mobile payments, they had yet to break into proximity offline payments because of the monopolistic control of China UnionPay and the mobile operators. However, QR codes offered a viable solution. QR codes were secure, easy to use, and were already familiar to customers. Yet, the key advantage was that they were hardware independent. To get UnionPay or a handset manufacturer to embed an Alipay hardware-based technology would have been incredibly difficult and costly, as would attempting to penetrate the NFC payments market. However, with an app-based QR code, Alipay and Tencent needed consumers to download the app to their smartphone to gain access to the payment functionality.



Alipay was actually the first to use QR codes for payments when it launched QR payment in December 2011. WeChat followed in September 2012 with QR codes for both exchanging contact details and for payments. Today, over a million merchants across China are using Alipay or WeChat Pay QR code solutions. Each merchant has its own set of QR codes that users can scan with their phone and pay, or by using 'quick-pay' functionality, a user can display a dynamic (changes every 30 seconds) QR code to a merchant who scans the code with a device to complete the transaction.

QR code-based mobile payments seem to have caught on in China for a number of reasons:

 Platform agnostic – Both the Alipay and WeChat pay apps work across the Android and Apple iOS platforms, which account for 99.3% of China's smartphone market in urban areas. →



- Easy to use Users unlock their phone and click on an icon to show an auto-refreshing QR code that can be scanned by the merchant.
- Inexpensive Users make transactions for free and receive points that can be exchanged for gifts or credit. On average, merchants pay 0.6% to process digital payment transactions through WeChat Pay or Alipay.
- Ubiquitous Over 600,000 merchants accept Alipay QR code payments. On a promotional day, when WeChat charged no merchant fees for using its network, 700,000 accepted WeChat Pay in China.

QR codes were technically banned by China's regulators in May 2014, although in practice, they were still being used throughout the payments industry. The regulator rarely has enforced the ban, and earlier in 2017, the government officially provided regulations around QR codes. In June 2017, we even saw China UnionPay launching a QR code-based mobile payment platform, perhaps a tacit acceptance that NFC was no longer the future. Indeed, we estimate that over 90% of mobile payment transactions in the first half of 2017 were QR code transactions.

QR codes have proven to be an excellent technology for the Chinese mobile payment market as both consumers and merchants have flocked to the easy-to-use, cheap and ubiquitous technology. Although China could be considered the leader in QR code payment, other countries like India and Thailand, as well as a part of Africa are also trialling the technology for both their domestic payments market and to provide acceptance for Chinese tourists when they travel abroad.

The growth of QR code mobile payments will continue especially as China and other countries start to define QR code standards that could lead to mobile payment platform interoperability. Despite the advances in other more complex mobile and contactless technology, the industry will likely have a place for QR codes for many years to come



Zennon Kapron Director Kapronasia

About Zennon Kapron: Zennon Kapron is a Director at Kapronasia and has been involved in financial technology for over 20 years. Before Kapronasia, Zennon was the Global Banking Industry Manager for Intel and the CIO for Citigroup Portugal. He holds a B.S. in Computer Science from Syracuse University and an MBA from INSEAD.

About Kapronasia: Kapronasia is a leading independent research and consulting company focused on the Asian financial services industry. We help financial institutions, technology vendors, consultancies and private equity companies understand the impact of business, technology, and regulatory issues in banking, payments, insurance and capital markets.

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Even though Europe is still a fragmented market for e-wallets it promises to consolidate, concentrate and grow due to wider adoption of mobile payments among online consumers.

Which are the top findings of the research that Mobey Forum's Digital Wallet Working Group did into the current state of the European digital wallet landscape?

One of the key findings the research is highlighting is the variety of digital wallet models that are gathering momentum simultaneously. Unsurprisingly, of the 49 plus live digital wallets identified, 26 are operated by banks. Of these, bank consortia account for 14 digital wallets. What is particularly interesting, however, is the popularity of bank-led mobile wallets that have been designed for a specific domestic market. Also, 12 of these have been developed and launched by single banks without any collaboration and participation from other banks in their market. Examples include iDEAL (the Netherlands), MobilePay (Denmark), BKM Express (Turkey), Swish (Sweden), Vipps (Norway).



Which are the most successful bank-led wallets and what market conditions and features have made them achieve this success?

Success is difficult to define here since each wallet pursues different objectives. Certainly, there are some shared characteristics, however. Reach, ease of use and facility are all key commonalities. The delivery of unique value to the user, in the form of value-added services, will be a key factor in driving digital wallet adoption. Ease of access and speed of use are determining factors. As the digital ecosystem continues to evolve, we expect to see digital wallets position themselves right at the heart of the shopping experience, not only acting as a payment instrument, but also as a vehicle for banks and merchants to deliver new value to their customers.

66 The delivery of unique value to the user, in the form of value-added services, will be a key factor in driving digital wallet adoption.

We have recently seen wallets backed up by one or more retailers and banks (LyfPay and YoYo wallet) that offer a wallet-loyalty ecosystem available for all merchants. What is your view on the likeliness for large-scale adoption of these initiatives?

In these models, what banks and merchants lose in perceived exclusivity they gain in interoperability, reach and the potential to create new bundles of value-added services for their customers. Success here lies in the commercial specifics of each proposition. A balance must be struck between all parties to ensure that each participant feels that their investment in the solution is delivering a positive return, again, through reach to new prospective customers, unique value creation and/or an enhanced digital experience for their existing customers. →



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Mobey Forum

How do you see the digital wallet landscape development over the next year?

Like most fledgling markets, early adoption of digital wallets is giving way to market fragmentation and the proliferation of different solution types. Inevitably, a period of consolidation will follow before consumers rally around a smaller number of dominant players and models. The interesting thing about this market is that several wallet models are gaining traction at the same time. We can expect this co-existence to continue, and most probably to expand, over the next twelve months. In the end, it is about digitalising the whole content of the wallet, not just about the money and credit cards.



What will be the impact of PSD2 on the development of the digital wallet landscape in Europe?

PSD2 is a complete game changer. Not only does it level the playing field in terms of competition, but it also paves the way for new levels of analytics to be built into digital wallet functionality. From January 2018 (with the user's permission), digital wallet providers will be able to pull account information from across the user's entire portfolio of different accounts. This will create huge opportunities for banks, merchants, payment service providers and other stakeholders to differentiate their services through the quality and depth of their analytics. The results have the potential to transform digital financial services entirely, with the digital wallet positioned as the user interface. It is going to be nothing short of amazing •



Maikki Frisk Executive Director Mobey Forum

About Maikki Frisk: Maikki Frisk is a digital evangelist, specialised in sector disruption, digital service and change design, cloud, IoT and mobile technology. She held senior leadership and partnership positions at Microsoft and co-founded digital transformation consultancy Tribula.

About Mobey Forum: Mobey Forum is the global industry association empowering banks and other financial institutions to lead in the future of digital financial services. Mobey Forum connects industry thought leaders to identify commercial drivers for the development of better digital commerce. Mobey Forum's members collaborate to analyse business strategies and technologies to create innovative, interoperable and competitive digital financial services.

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Α

Access Card

A plastic card used in an automated teller machine (ATM) to complete deposits, cash withdrawals, account transfers, and other related account functions.

Access Control Server (ACS)

Provides cardholder authentication through username and password and decides if the data is valid or not. ACH sends the signature to the customer's browser and to the Merchant Plug-in (MPI). Credit card issuers are required to maintain an ACS used to support cardholder authentication.

Account history

The payment history of an account over a specified period, including the number of times the account was past due or over the credit limit.

Account holder

Individual(s) responsible for paying the amounts charged to an account. A person can be allowed to use a card as an authorized user but not be legally liable for the debt.

ACH Network

The ACH Network is at the center of commerce in the US, moving money and information from one bank account to another through Direct Deposit and Direct Payment via ACH transactions, including ACH credit and debit transactions; recurring and one-time payments; government, consumer and business-to-business transactions; international payments; and payments plus payment-related information. Each year it moves more than USD 40 trillion and nearly 23 billion electronic financial transactions, and currently supports more than 90% of the total value of all electronic payments in the US. As such, the ACH Network is now one of the largest, safest and most reliable payment systems in the world, creating value and enabling innovation for all participants.

Acquirer

Financial institution which concludes an agreement with merchants for the acceptance of credit cards as a means of payment for goods and services, and settles card payments for merchants.

Address verification service

Checking method for VISA, Mastercard and American Express to prevent fraud for credit card payments in long distance transactions in which the numerical address data provided by the customer is compared with the address data stored at the credit card company.

Alternative payments

Alternative Payments methods are all those payments that are not cards running on global scheme networks such as Visa, Mastercard or American Express.

American Express

A company that provides credit cards, charge cards and traveler's check businesses. In 2016, credit cards in the American Express network accounted for 22% of the total volume of credit card transactions in the US, with 109.9 million active cards.

American Express SafeKey

A 3-D Secure protocol designed to reduce online fraud by confirming the cardhiolder's identity with an additional password.

Application programming interface (API)

A formalised set of software calls and routines that can be referenced by a software application programme in order to access supporting network services.

App store

An online marketplace where users of smartphones and other mobile devices can browse, purchase, and download applications, or 'apps', that augment the capabilities of their devices.

Arbitration

The process by which card companies determine whether an issuer or an acquirer has ultimate responsibility for a chargeback. Either member initiates his process after the re-presentment process is completed.

Authentication

A security measure designed to establish the validity of a transmission, message, or originator, or a means of verifying an individual's authorisation to receive specific categories of information or transaction approval Encyclopedia of Terminology for the Acquiring Industry 22 (in the case of plastic cards or payment orders).

Authorisation

Online payments often involve direct authorisation from the bank of the consumer making the payment. This means that a check is carried out immediately to check whether the consumer is entitled and in a position to make the payment.

В

Bancontact/MisterCash

It is the domestic debit card scheme in Belgium, allowing consumers to pay in real-time and guarantee payment to (online) merchants and businesses. Bancontact payments are immediately debited from the consumer's bank account. The seller's account will be credited the next working day. Today, there are more Bancontact/ MisterCash cards in circulation (15 million) than there are Belgian citizens (10.5 million). No less than 99% of all consumers know Bancontact/MisterCash and 86% of all payments by electronic card are Bancontact/MisterCash payments. Bancontact/MisterCash is the offline and online payment method in Belgium. Merchants are most often charged a fixed fee (EUR 0.25-0.50) and a percentage of the transaction (between 1.50% and 2.25%).

BIN (Bank Identification Number)

The first six numbers that appear on a credit card used to identify the institution issuing the card to the cardholder. Also known as Issuer Identification Number (IN).

Bank-as-a-platform

A strategy used to allow third parties to develop applications and services around the financial institution via open APIs. Banks, as such, become fully-fledged digital players, competing and collaborating for customer relevance in payment and information services.

Back-end processor

A third party provider that offers communication and processing systems to acquirers. The processing systems connect with the interchange systems for clearing and settlement services for the same acquirers. In some cases, the acquirer may act as its own back-end processor.

Bank transfer

A payment or money transfer between two bank accounts.

Banking model

It represents the diversified means by which a bank helps a customer create an operating account, make money transfers, pay pending orders and sell foreign currency.

Banking sector

It is the section of the economy devoted to the holding of financial assets for others, investing those financial assets as leverage to create more wealth, and the regulation of those activities by governmental agencies.

Bill payment

Bank provided service which allows customers to receive and pay bills by means of a computer or a smartphone.

Billing and Settlement Plan

The Billing and Settlement Plan (BSP) is the most widespread system in the world for simple processing of airline ticket sales.

С

Card association

It is a network comprising issuing banks and acquiring banks that process payment cards.

Card-not-present (CNP)

Card transaction in which a card is not physically presented to a merchant, such as over the internet.

Card scheme

It is a payment network directly connected to a payment card. A payment card is a payment tool issued by the bank or the financial institution that is member of the payment network (Visa, Mastercard).

Card verification value (CVV2)

A unique 3-digit check value generated using a secure cryptographic process that is indent-printed on the back of a Visa card or provided to a virtual account holder.

Cash-on-delivery

Payment method in which payment (cash or by card) takes place when goods are delivered. In Belgium, France and the Netherlands it is known as 'rembours' or 'remboursement'.

Chargeback

A process in which the card issuer can call back a transaction either in full or in part. A chargeback often applies if a cardholder denies having performed a card transaction. In that case, the issuer files an objection with the acquirer and demands that the transaction amount be returned from the merchant's account.

Checkout

A checkout page is an ecommerce website page that a shopper sees during the checkout process. Those wishing to purchase a product / service will move through a series of checkout pages in step-by-step fashion until the transaction is finalised.

Chip-and-pin payments

Chip-and-pin is a UK government-backed initiative to implement the EMV (short for Europay, Mastercard and Visa) standard for smart payment cards. The name of this initiative stems from the presence of a semiconductor chip and associated circuitry in the smart card, which is used in tandem with a PIN (personal identification number).

In use, the smart card is placed into a PIN pad terminal or modified swipe-card reader, which accesses the chip in the card. The user enters a 4-digit PIN that is checked against the information stored on the card. If the entered PIN matches the stored value, the transaction is permitted to proceed.

Clearing

The process of submitting transactions to the respective card company (Visa, Discover, AMEX or Mastercard) for interchange processing, the fourth in the seven stages of processing. This presentment of the transactions is also a request for payment in the settlement process.

Click-and-collect

It is the process by which the consumer orders online (click) and collects his merchandise at a local store. It is a compromise between online and in-store shopping. The main benefits of clickand-collect for the consumer are saving delivery or shipping delays and costs. It also saves time and prevents shopping in congested stores. In some cases, click-and-collect may enable consumers who are afraid of online payment to pay at the collecting point.

Closed-loop card / application

A credit or gift card that can be used only to purchases from a single company.

Cloud-based payments

Performance of NFC card emulation without using a hardware secure element (SE) in mobile handsets.

Collecting payment service provider

It is a technical intermediary between the seller's website and one or more payment schemes, and collects the funds for one or more payment methods. They take away the programming complexity for the online seller by only having to integrate with the collector's payment platform. The collector takes care of the data processing to the applicable payment method scheme. In addition, the collector collects the transaction funds for one or more payment methods, and settles the amounts, often accumulated into the merchant's bank account.

Consumer account

A deposit account held by a financial institution and established by a natural person primarily for personal, family, or household use and not for commercial purposes.

Consumer behaviour

The process by which individuals search for, select, purchase, use, and dispose of goods and services, in satisfaction of their needs and wants. See also consumer decision making.

Consumer data analytics

It is the systematic examination of a company's customer information to identify, attract and retain the most profitable customers.

Contactless payment

Payment transaction which requires no physical contact between the consumer payment tool and POS terminal. The user simply waves the contactless card in the proximity of the RFID-enabled merchant terminal in order to scan the user account information.

Credit card

A card indicating that the holder has been granted a line of credit. It enables the holder to make purchases and / or withdraw cash up to a prearranged ceiling; the credit granted can be settled in full by the end of a specified period or can be settled in part, with the balance taken as extended credit.

Cross-border ecommerce

International ecommerce is called cross-border ecommerce, when consumers buy online from merchants located in other countries and jurisdictions. Online trade between consumers and merchants which share one common language and border or which make use of the same currency are not always perceived as cross-border by consumers. EU neighbours which speak a common language, united by SEPA, are just one example.

Cross-channel

Cross-channel implies merchants who interchangeably use multiple channels to market, sell, and interact with customers. For instance, when a customer uses a merchant platform's mobile app to look at a product but does not complete the purchase, the merchant can use a cross-channel approach to remarket that product by serving up ads for it even when the customer is on another channel or platform (say email or social media).

Customer due diligence (CDD)

Identification and verification of customers and beneficial owners.

Customer loyalty

It is defined as a customer continuing to believe that a certain merchant's product / service offer is their best option which fulfills their value proposition whatever that may be. They take that offer whenever faced with the purchasing decision. Customer loyalty is all about attracting the right customer, getting them to buy, buy more often, buy in higher quantities, and bring even more customers.

Customer reach

An estimated number of the potential customers that are possible to reach through an advertising medium or a promotional campaign.

CVV

A unique check value encoded on the magnetic stripe and replicated in the chip of a card or the magnetic stripe of a Visa card to validate card information during the authorisation process.

D

Debit card

A plastic card linked to a checking or savings account. Offline- or signature-based debit cards work in the merchant environment the same as a credit card transaction and are not required to be 'online' to the account balance. Offline signature-based functionally work like credit cards; an initial transaction is used to hold funds and a second to settle or remove the funds from the card balance. Online debit cards or PIN-based debit cards ride over the ATM network; they require a PIN and the ability to authorise against the actual balance of the card in a single step transaction. Prepaid cards fall into the debit category.

Digital goods

A general term that is used to describe any goods that are stored, delivered and used in its electronic format. Digital goods are shipped electronically to the consumer through e-mail or download from the Internet.

Digital identity (e-ID)

A collection of identity attributes, an identity in an electronic form (e.g. electronic identity).

Digital money

Electronic money or e-money is an evolving term that can have different meanings but in principle involves the use of computer networks and digital stored value systems to store and transmit money. It may have official legal status or not.

Digital single market

It is one in which the free movement of goods, persons, services and capital is ensured and where citizens, individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence.

Digital wallet

Also called an e-wallet, is a digital tool (software or app) for consumers to store their payment methods. It stores credentials of e.g. debit cards, credit cards, and alternative payment methods. Some e-wallets also store loyalty programmes..

Dynamic currency conversion (DCC)

Dynamic currency conversion refers to the situation whereby the shopper is offered a choice at the moment of payment to pay in either the home currency of the merchant or the shopper's home currency. This offer is instantly generated by the PSP platform (often in conjunction with a DCC provider), as the DCC software recognizes the home currency of the shopper based upon the first six digits of the card, and results in a conversion wherein a mark-up has been included. If conversion can be applied depends on the fact whether the DCC provider supports currency conversion for a particular currency (otherwise the transaction is authorized in the merchant's home currency).

Under DCC regulation the mark-up applied (generally between 2 and 4%) should be clearly visible for the shopper and it should be up to the shopper to make a choice (no opt-out allowed). The DCC mark-up (2-4%) can be shared between the merchant, Payment Service Provider, DCC provider and acquirer. DCC allows merchants to mitigate processing costs by earning back some of the commission if the shopper's decides to pay in their home currency.

Direct carrier billing

It is a payment method for purchased items or services by charging the purchase to mobile phone account. At the time of checkout, the customer selects the mobile billing option on a smartphone and follows a two-factor authentication procedure. After the authentication, the consumer's mobile account is charged for the amount of the purchase, plus applicable taxes and, in some cases, a processing fee. Direct mobile billing does not require any previous registration, and it does not involve any other sources of funding such as credit cards or bank accounts.

Direct debit

Pre-authorised debit on the payer's bank account initiated by the payee.

Dispute transaction (card-based)

A dispute initiated by the cardholder. In the bank card industry, the dispute can be in the form of a chargeback.

Disruptive innovation

It is an innovation that helps create a new market and value network, and eventually disrupts an existing market and value network (over a few years or decades), displacing an earlier technology. The term is used in business and technology literature to describe innovations that improve a product or service in ways that the market does not expect, typically first by designing for a different set of consumers in a new market and later by lowering prices in the existing market.

Distributing payment service provider

It is a technical intermediary between the seller's website and one or more payment schemes. They take away the programming complexity for the online seller by only having to integrate with the distributors payment platform. The distributor takes care of the data processing to the applicable payment method scheme.

Dunning

The process of insistent demands for the payment of a debt. In the business context, it refers to the collections process, whereby a business communicates with customers who have failed to pay their bills.

E

EBA Clearing

It is a bank-owned provider of pan-European payment infrastructure solutions. The company was established in June 1998 by 52 major European and international banks with the mission to own and operate EURO1, the only privately owned RTGSequivalent large-value payment system on a multilateral net basis.

e-Banking (online banking)

A method of banking in which the customer conducts transactions electronically via the internet.

eCheck

Electronic version of a paper check, often used to conduct transactions over the internet.

Ecommerce

A way of doing real-time business transactions via telecommunications networks when the customer and the merchant are in different geographical places. Electronic commerce is a broad concept that includes virtual browsing of goods for sale, selection of goods to buy, and payment methods. Electronic commerce functions on a bona fide basis, without prior arrangements between customers and merchants. It operates via the internet using any combination of technologies designed to exchange data (such as EDI or e-mail), access data (such as shared databases or electronic bulletin boards), and capture data (through bar coding and magnetic or optical character readers).

e-IDAS

The European regulation for the electronic identification and trust services for electronic transactions. Since its announcement in July of 2014, the intent of the elDAS Regulation has been to facilitate secure and seamless electronic transactions throughout the European Union (EU) by providing a regulatory environment that would promote their use.

e-Invoicing

Electronic invoicing is the exchange of the invoice document between a supplier and a buyer in an integrated electronic format. Traditionally, invoicing, like any heavily paper-based process, is manually intensive and is prone to human error resulting in increased costs and processing lifecycles for companies.

Electronic banking

A form of banking in which funds are transferred through an exchange of electronic signals between financial institutions rather than an exchange of cash, checks, or other negotiable instruments.

Electronic direct debit

Method in which purchasers issue the merchant with authorisation to debit funds directly from their account for a cashless transaction (in online trading by confirming the basket of goods and in POS trading with their signature or PIN). The amount is booked automatically from the consumer's account and credited to the recipient's account.

Electronic funds transfer (EFT)

The paperless transfer of electronically recorded payment data with a monetary value in a specific currency, accepted by a customer/contractual merchant or a bank instead of cash as a means of payment.

Electronic payments

Payments that are initiated, processed and received electronically.

EMV

The international smart card standards group made up of Europay International, Mastercard International, and Visa International.

European Banking Authority (EBA)

It is a regulatory agency of the European Union headquartered in the UK. It concerns itself primarily with banking regulation, but has a mandate to develop technical standards for the security of internet payments.

European Central Bank (ECB)

The European Central Bank (ECB) is the central bank for Europe's single currency, the euro. The ECB's main task is to maintain the euro's purchasing power and price stability in the euro area.

European Payments Council (EPC)

The purpose of the European Payments Council (EPC), representing payment service providers (PSPs), is to support and promote European payments integration and development, notably the Single Euro Payments Area (SEPA). The EPC is committed to contributing to safe, reliable, efficient, convenient, economically balanced and sustainable payments, which meet the needs of payment service users and support the goals of competitiveness and innovation in an integrated European economy.

E-wallet

See Digital wallet.

F

Faster Payments

A UK banking initiative to reduce payment times between different banks' customer accounts from three working days using the long-established BACS system, to typically a few hours. Many other countries are now adopting a similar model.

Financial inclusion

The ability of an individual, household, or group to access appropriate financial services or products. Without this ability people are often referred to as financially-excluded.

Financial institution (FI)

Any bank, savings and loan, credit union, or other institution organised under either national or state banking laws capable of accepting deposits and / or extending credit.

Financial services

Services and products provided to consumers and businesses by financial institutions such as banks, insurance companies, brokerage firms, consumer finance companies, and investment companies all of which comprise the financial services industry.

Fintech (financial technology)

An economic branch where companies develop technologies in order to improve the financial system.

G

General Data Protection Regulation (GDPR)

The General Data Protection Regulation (GDPR) was promulgated by the European Commission in 2016, and will take effect in a two-year transition period. The regulation is meant to strengthen and unify data protection for individuals within the EU.

L

iDEAL

iDEAL is an internet payment method in the Netherlands, based on online banking. Introduced in 2005, this payment method allows customers to buy securely on the internet using direct online transfers from their bank account.

In-app payments

Payments made from within mobile applications in order to purchase dedicated content like digital money, services or even products.

Installment payments

The payments whereby the cardholder is able to split a payment into smaller transactions, spread over an agreed period of time.

Instant payments

According to the Euro Retail Payments Board (ERPB) instant payments are electronic retail payment solutions available 24/7/365 and resulting in the immediate or close-to-immediate interbank clearing of the transaction and crediting of the payee's account with confirmation to the payer (within seconds of payment initiation). This is irrespective of the underlying payment instrument used (credit transfer, direct debit or payment card) and of the underlying arrangements for clearing (whether bilateral interbank clearing or clearing via infrastructures) and settlement (e.g. with guarantees or in real-time) that make this possible.

Interbank

A transaction or exchange operated between banks.

Interchange fee

When a customer pays for a purchase in a store using a credit or debit card, the bank that serves the store (the acquiring bank) pays a fee to the bank that issued the payment card to the consumer (the issuing bank). A so-called interchange fee is then deducted from the final amount that the store merchant receives from the acquiring bank for the transaction. Today, only competition rules limit the fees set by banks and payment card schemes, which are hidden from the consumer and neither retailers nor consumers can influence.

Interchange Fee Regulation (IFR)

The European Parliament and the Council adopted the Interchange Fee Regulation (IFR) on April 29, 2015. Many provisions are to take effect on different dates, arguably the biggest change, the interchange fee cap, came into effect on December 9, 2015.

Interchange network

An electronic network maintained by the card companies that exchanges data related to the value of card sales and credits among issuers and acquirers.

International Bank Account Number (IBAN)

Standardised international bank account number, consisting of account number, sorting code and prefix, for international payment transactions.

Interoperability

A situation in which payment instruments belonging to a scheme may be used in other countries and in systems installed by other schemes. Interoperability requires technical compatibility between systems, but can only take effect where commercial agreements have been concluded between the schemes concerned.

Issuer

Public and private companies that enter direct contractual relationships with consumers and / or businesses to maintain and service such relationships through the issuance of one or more plastic cards.

Issuing bank

The financial institution member of the card companies that has the responsibility for issuing credit, prepaid, corporate, charge and debit cards to a consumer.

L

Loyalty card

A brand – specific or retailer – labeled card that has cardholder benefits tied to purchase amounts, usage, membership, or number of visits. Benefits typically include coupons or discounts for future services.

Μ

Market fragmentation

Separation of a market that is relatively uniform in character into different segments that have different preferences and demand patterns, each requiring different marketing approaches.

Marketplace

An online marketplace / online platform is a type of ecommerce website where product and inventory information is provided by multiple third parties, whereas transactions are processed by the marketplace operator. Online marketplaces are the primary type of multichannel ecommerce. In an online marketplace, consumer transactions are processed by the marketplace operator and then delivered and fulfilled by the participating retailers or wholesalers (often called drop shipping).

Merchant account

A type of bank account through which businesses can accept debit and credit card payments. The merchant account is the outcome of an agreement between an acceptor and and a merchant acquiring bank.

Merchant aggregator

Is a service provider for ecommerce merchants who helps them process their payment transaction. Under this arrangement, the merchant can accept credit cards and bank transfers without setting up a merchant account with a bank or card association, the merchant being paid by the aggregator.

Merchant bank

A bank which is licensed as a member of Visa / Mastercard to provide merchants with an account and therefore allows them to accept credit cards.

Merchant identification number

A unique number assigned to a merchant account to identify it throughout the transaction process.

Merchant services provider (MSP)

A service provider that sets up an account on behalf of the merchant and provides processing and report tools for accepting online payments. Each transaction is facilitated by the MSP on behalf of the merchant.

MetaToken

It is a token that stays constant for a particular card number (PAN). MetaTokens give access to merchants who don't want cardholder data in their system but they still want to maintain a relationship with the card for data analytics. These MetaTokens allow merchants to analyse card usage for the life of the card. The same MetaToken will be returned each time a specific card is used whether it is for a purchase, credit return, card-on-file, billbacks, recurring membership / subscription payment, etc.

Millennials

A name given to the generation born between 1982 and 2004. The Millennial generation follows Generation X (1960-1980) in order of demographic cohorts. This generation is often associated with technology and social media. Also known as Generation Y.

Mobile banking

It is a financial service provided by a bank or a financial institution for its customers using a mobile device (smartphone or tablet). The software behind it (the app) offers the mobile banking service on a 24-hour basis.

Mobile payments

Also referred to as mobile money, mobile money transfer and mobile wallet, mobile payments generally refer to payment services operated under financial regulation and performed from or via a mobile device. Mobile payment is an alternative payment method. Instead of paying with cash, check, or credit cards, a consumer can use a mobile phone to pay for a wide range of services and digital or hard goods.

Mobile network operator (MNO)

A telecommunications service provider organisation that provides wireless voice and data communication for its subscribed mobile users. MNOs are independent communication service providers that own the complete telecom infrastructure for hosting and managing mobile communications between the subscribed mobile users with users in the same and external wireless and wired telecom networks. MNOs are also known as carrier service providers, mobile phone operator and mobile network carriers.

Monetisation

To monetise is to convert an asset into or establish something as money or legal tender. The term 'monetise' has different meanings depending on the context. It can refer to methods utilised to generate profit, while it also can literally mean the conversion of an asset into money. For example, the US Federal Reserve can monetise the nation's debt; this involves the process of purchasing debt (treasuries) which in turn increases the money supply. This essentially turns the debt into money (monetisation).

Mobile point of sale (m-POS)

A smartphone, tablet or dedicated wireless device that performs the functions of a cash register or electronic point of sale.

Mobile wallet

It is a payment service which enables users to receive and send money via mobile devices. For consumers, all of credit and debit card information is available in one place. Mobile users then activate their mobile wallet on their mobile device by downloading the provider's corresponding app.

Mail Order / Telephone Order

The purchase of goods or services, with the purchase order issued by phone or in writing by fax or using an order card.

M-Pesa

A mobile payments system based on accounts held by a mobile operator and accessible from subscribers' mobile phones. The conversion of cash into electronic value (and vice versa) happens at retail stores (or agents). All transactions are authorised and recorded in real-time using secure SMS.

Multichannel

Multichannel means having a presence on more than one channel or platform. For example, if a merchant is marketing products on the proprietary website, in person, and via catalogues, then the merchant is conducting multi-channel marketing.

MyBank

MyBank is an e-authorisation solution which enables safe digital payments and identity authentication through a consumer's own online banking portal or mobile application.

Ν

NACHA

Abbreviation for National Automated Clearing House Association. The Electronic Payments Association, a national organization that establishes the standards, rules, and procedures for electronic payments.

National Retail Federation (NRF)

The world's largest retail trade association, with membership that encompasses all retail formats and distribution channels, including department, specialty, discount, catalogue, Internet, and independent stores as well as the industry's key trading partners of retail goods and services.

NFC

Near Field Communication (NFC) is a short-range wireless connectivity standard (Ecma-340, ISO/IEC 18092) that uses magnetic field induction to enable communication between devices when they are touched together, or brought within a few centimeters of each other. Jointly developed by Philips and Sony, the standard specifies a way for the devices to establish a peer-to-peer (P2P) network to exchange data. After the P2P network has been configured, another wireless communication technology, such as Bluetooth or Wi-Fi, can be used for longer range communication or for transferring larger amounts of data.

0

Online Banking e-payment (OBeP) scheme

The Online Banking e-Payments (OBeP) scheme is a type of payments network designed to facilitate online bank transfers. In an OBeP scheme, the consumer is authenticated in real-time by the consumer's financial institution. The availability of funds is validated in real-time and the consumer's financial institution provides guarantee of the payment to the merchant in case the payment is made as a credit transfer (push payment): i.e. the consumer / buyer initiates the payment. The merchant receives a real-time guarantee so he can continue with the fulfilment process. The actual funds arrive later (D+1), according to the SEPA Credit Transfer Scheme.

There are three type op schemes. A mono-Bank OBeP scheme entails that a seller or Payment Service Provider has a separate connection to each participating financial institution. Multi-Bank OBeP scheme – entails that a seller or Payment Service Provider has one single connection to the OBeP network in order to accept payment from any participating financial institution. Brands: iDEAL (Netherlands) GiroPay (Germany), MyBank (EU), ePS (Austria) and Bankaxess (Norway).

An overlay OBeP – third party (the overlay provider) who sits between the payment network and the consumer. The overlay provider requires the consumer to share their online banking credentials with them in order to have access to the consumer's bank account and to initiate the credit transfer to the merchant. Examples: SOFORT banking (Germany), Trustly (pan-european).

Omnichannel

Omnichannel retailing is concentrated more on a seamless approach to the consumer experience through all available shopping channels, such as mobile internet devices, computers, brick-and-mortar, television, radio, direct mail or catalogue. Retailers are meeting the new customer demands by deploying specialised supply chain strategy software. Retailers using an omnichannel approach will track customers across all channels, not just one or two. In the brick-and-mortar channel, digitallysavvy consumers are entering stores already well-informed about a product's features and prices and expect store employees to know more than they do.

Online Banking See e-Banking.

Online payment

In the context of Internet commerce, it is a financial transaction between a buyer and a seller resulting from an Internet purchase where the buyer has selected its payment method online goods and services are purchased over the Internet (whether through a browser or in-app).

Online payment method

It refers to the ways shoppers can pay for their purchases over the Internet. Online payment methods rely on one of the five core payment instruments used to ensure the money flows from buyer to seller: card payments, bank transfer payments, direct debit payments, cash payments, cryptocurrency payments.

Online shopping (online retailing)

A form of electronic commerce which enables consumers to buy goods or services from a seller over the internet without an intermediary service. An online shop, e-shop, e-store, internet shop, webshop, webstore, online store, or virtual store evokes the physical analogy of buying products or services at a bricks-andmortar retailer or shopping centre. The process is called businessto-consumer (B2C) online shopping.

Ρ

Pay-as-You-Go

An unbanked, credit-poor, or noncredit customer who mostly deals with cash. These consumers are targets for a prepaid card.

Payee

Party (beneficiary) to whom a bill of exchange (such as a check or draft) is made payable.

Payer

A person or a party that makes a payment for products or services received to another person or party.

Payment Application Data Security Standard (PA-DSS)

It is a global security standard created by Payment Card Industry Security Standards Council. It aims to prevent payment applications for third parties from storing prohibited secure data, such as magnetic stripe, CVV2, PIN.

Payment Application Qualified Security Assessor (PA-QSA)

Payment Application Qualified Security Assessor (PA-QSA) Companies are organisations that have been qualified by the PCI Security Standards Council to perform PA-DSS Assessments for PA-DSS Program purposes. PA-QSA Employees are individuals who are employed by a PA-QSA Company and have satisfied all PA-QSA Qualification Requirements applicable to employees of PA-QSA Companies who will conduct PA-DSS Assessments.

Payment Card Industry Data Security Standard (PCI DSS)

Common security standards for merchants and third parties reached by Mastercard, Visa and other card associations with the goal of protecting payment and card account data. The PCI Standard is mandated by the card brands and administered by the Payment Card Industry Security Standards Council.

Payment Card Industry Security Standards Council (PCI SSC)

Originally formed by American Express, Discover, JCB, Mastercard, Visa, its goal is to manage the continuous development of Payment Card Industry Data Security Standard.

Payment brand

A payment brand refers to a consumer-facing brand that is directly linked to one of the five meta payment instruments, for example MasterCard (card payments), ELV (direct debit payments) and Bitcoin (crypto-currency payments). When a shopper selects a payment brand, they instantly select one of the five payment instruments to complete the online purchase.

Payment flow

The clockwise transfer of money in payment for the counter-clockwise physical flow of goods and services. The payment flow is the monetary payment for goods and services received by the household sector from the business sector through product markets and the monetary payment for resource services obtained by the business sector from the household sector through factor markets.

Payment gateway

A mix of hardware and software which gives merchants the ability to perform authorizations from a website over the internet. It is the link between a merchant website and the processor.

Payment instrument

Payment instruments are an essential part of payment systems. Payment instruments are used to ensure the money flows from buyer to seller.

- Card payments
- Bank transfer payments
- Direct debit payments
- Cash payments
- Crypto-currency payments
- Direct Carrier payments

Payment method

The form of payment used for a transaction. In the case of credit card charges or refunds, the payment method reflects the type of credit card. In the case of eCheck transactions, the payment method would be eCheck indicating that a consumer's checking account has been charged or refunded. All transactions entered through the system must contain a valid payment method.

Payment page (checkout)

A Web-based payment page for simple and secure acceptance of various payment methods. End customers input their data into a website hosted by Wirecard to make online payments. The Payment Page enables merchants to accept credit cards and other national and international means of payment such as direct debits, giropay, iDEAL, eps, paybox, paysafecard and others in a fast, secure manner with PCI compliance.

Payment processor

A company (usually a third party) contracted by a merchant to handle transactions from various channels such as credit cards and debit cards from merchant acquiring banks.

Payment service provider (PSP)

Payment Service Providers (PSPs) are service providers that enable web- and offline transactions for merchants. PSPs aggregate various payment methods from various acquirers into one contract and one technical interface for merchants.

PIN (Personal Identification Number)

A unique number used as an authentication method by the cardholder when using debit cards at an ATM, point-of-sale or for online payments. Also used with some credit cards.

Peer-to-peer payments

An online technology that allows customers to transfer funds from their bank account or credit card to another individual's account via the Internet or a mobile phone.

Point of sale (POS)

Point of sale (POS) or checkout is the location where a transaction occurs. A "checkout" refers to a POS terminal or more generally to the hardware and software used for checkouts, the equivalent of an electronic cash register.

Point to Point Encryption (P2PE)

It is a standard set up by PCI Security Standards Council, which encrypts payment card data to prevent fraud.

Prepaid card

Stored-value card used to pay for goods and services, mainly as an alternative to cash. Can be open loop or closed loop. Prepaid cards are sometime disposable after the stored value is exhausted or reloaded.

Processing fees

The processing cost does only relate to the processing of data originating from the merchant's website to the applicable financial institution or acquirer after each transaction. Most often they charge a fixed fee per processed transaction between EUR 0.10 and EUR 1.00. Depending on the Payment Service Provider they could charge for approved transactions, declined transactions, authorization or transaction reversals and refunds, for example.

Provisioning

Storing card data in NFC-enabled smartphones in order to be able to make payments using the mobile phone. The card data is stored on the SIM card or in a secure area of the smartphone.

PSD (Payment Service Directive)

The Directive on Payment Services (PSD) provides the legal foundation for the creation of an EU-wide single market for payments. The PSD aims at establishing a modern and comprehensive set of rules applicable to all payment services in the European Union. The target is to make cross-border payments as easy, efficient and secure as 'national' payments within a Member State. The PSD also seeks to improve competition by opening up payment markets to new entrants, thus fostering greater efficiency and cost-reduction. At the same time the Directive provides the necessary legal platform for the Single Euro Payments Area (SEPA).

PSD2

The European Commission adopted a proposal for a revised Directive 2007/64/EC on Payment Services ('the PSD2') on the 24th July 2013. The main high-level objectives of the revision are to promote better integration, more innovation and more competition in the market for payment services within the EU.

Q

QR codes

A QR code (quick response code) is a type of 2D bar code that is used to provide easy access to information through a smartphone. There are static QR codes, which are used to disseminate information to the general public and dynamic codes, which offer more functionality, such as editing the code at any time and targeting a specific individual for personalised marketing.

R

Receipt

A hard copy of the transaction, given to the consumer. Also called sales draft receipt.

Reconciliation

A message generated by an acquirer or an issuer, an originator or a receiver, or a terminal and a processor of an electronic transaction that advises the receiver of settlement information regarding transactions processed between the sender and the receiver.

Recurring billing transaction

A recurring payment that the merchant initiates automatically for services or goods at a prearranged schedule. To initiate a recurring billing transaction, the merchant requires the cardholder's permission upfront only once.

Recurring payments

The payments whereby the merchant is able to charge the customer's credit card without involvement of the cardholder or the need for the cardholder to re-enter credit card details when checking out. Recurring payments can service two business purposes: to facilitate for recurring billings (e.g. subscription based payments and utility bill payments) and to simplify checkouts for returning customers.

Returns

A sales return is merchandise sent back by a buyer to the seller, usually for one of the following reasons: excess quantity shipped, excess quantity ordered, defective goods, goods shipped too late.

Risk management

The process concerned with the identification, measurement, control, and minimisation of security risks in information systems and payment systems to a level commensurate with the value of the assets protected. Good risk management in the merchant programme requires meeting the challenges of reducing the exposure to risk and responding quickly when risk arises. Monitoring merchant activity with preset parameters allows the transactions to be rejected for examination before potentially incurring a loss.

S

SCT Scheme

The SCT scheme is an inter-bank payment scheme defining a common set of rules and standard procedures for credit transfers in euro.

SecureCode

A Mastercard authentication solution for online payments. Part of the 3-D Secure protocols, it standardises data infrastructure for passing cardholder authentication information among the merchant, acquirer, and issuer.

SEPA Direct Debit Mandate

It is a payment method through which a merchant, authorized by its customer, can collect future payments from its Euro bank account.

Single Euro Payments Area (SEPA)

This is the vision, directive and goal of the European Commission which means that citizens and companies within the European Union have to be able to pay with a single set of payment instruments. This set is the combination of a bank account and instruments like money transfer, direct debit and cards. SEPA signifies the end of international payments within Europe.

SEPA payment schemes

Simplified, the term scheme refers to a set of common rules and standards. In Europe this is known as the SEPA payment scheme. The SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD) Rulebooks contain sets of rules and technical standards for the execution of SEPA payment transactions that have to be followed by adhering payment service providers. These rulebooks can be regarded as instruction manuals which provide a common understanding on how to move funds from account A to account B within SEPA.

Settlement

The process of transferring funds for sales and credits between acquirer and issuers, including the final debiting of a cardholder's account and the crediting of a merchant's account.

Settlement Bank

A bank, including correspondent or intermediary banks, that is authorised to execute settlement of interchange on behalf of the member or the member's bank.

Social platforms

Web-based technologies that enable the development, deployment and management of social media solutions and services. They provide the ability to create social media websites and services with complete social media network functionality.

SME

Small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms which employ less than a given number of employees. This number varies across countries. The most frequent upper limit designating an SME is 250 employees, as in the European Union.

Supply chain

The network created amongst different companies producing, handling and/or distributing a specific product. Specifically, the supply chain encompasses the steps it takes to get a good or service from the supplier to the customer.

Surcharge

In debit card usage, additional fees assessed to cardholders by merchants and ATM providers. Merchants are sometimes charged additional fees for nonqualified interchange transactions.

Т

Tokenization

The process of substituting a sensitive data with an easily reversible benign substitute. In the payment card industry, tokenization is one means of protecting sensitive cardholder PII in order to comply with industry standards and government regulations. The technology is meant to prevent the theft of the credit card information in storage.

Transaction

An act between a merchant and a cardholder that results in a paper or an electronic representation of the cardholder's promise to pay for goods or services received from the act.

Transaction number

A unique password issued by the card-issuing bank, which is used in addition to the PIN as extra security to confirm a transaction in internet banking.

Turnover

Sales volume net of all discounts and sales taxes registered on a yearly basis.

U

Unbanked

The word unbanked is an umbrella term used to describe diverse groups of individuals who do not use banks or credit unions for their financial transactions.

Underbanked

Consumers either having a checking or savings account, but also relying on alternative financial services.

Universal Wallet API

A digital wallet software developed by CardinalCommerce that allows merchants to use multiple digital wallets in their ecommerce operations.

V

Value chain

A value chain is the whole series of activities that create and build value at every step. The total value delivered by the company is the total sum of the value built up all throughout the company. Michael Porter developed this concept in his 1980 book 'Competitive Advantage'.

VAT

Consumption tax added to a product's sales price. It represents a tax on the "value added" to the product throughout its production process.

Velocity check

A frequency check, in which payment transactions are reviewed for repeating patterns within a defined (short) period. The check can be performed based on various data for a payment transaction (e.g., if a certain pattern repeats during a period, or even appears in clusters).

Verified by Visa: A Visa program to increase security and reduce fraud risks for online purchases. One of the 3-D Secure protocols, it works by connecting the merchant's website to Visa in order to obtain the specified fields at the time of purchase. The values are then submitted with the authorization request to verify wehther is an authentic cardholder purchase.

Virtual assistant

A person who helps someone else – usually a business owner or small business - with a variety of tasks from a remote location.

Virtual store

A retail presence on the Web. The virtual store is an online store that displays merchandise and an order form. A live text chat may be offered, in which the customer interacts in real time with a company representative.

Virtual terminal

Internet-assisted user interface for payment acceptance (including via MOTO), which is used, for example, in call centres. Allows direct payment acceptance without signature by the paying party. Risk management checks are performed in the same way as for online payments.

W

White label

White label refers to a product or service that is purchased by a reseller who rebrands the product or service to give the impression that the new owner created it. White label products are often produced via mass production.

THE PAYPERS

The Paypers - Insights into payments

The Paypers (www.thepaypers.com) is the leading independent source of news and analyses for professionals in the global payment industry. Our products are created by payment professionals and cover all significant developments in financial transactions, with a special focus on online payments, online banking, mobile payments, e-invoicing, e-identity and SEPA. Our portfolio includes headlines, newsletters, company profiles, publications, events, jobs, buyer's guides and advertising via multiple media channels and social networks.

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Margit Anglmaier - Vice President Corporate Communications - DIMOCO

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