

Online payments 2011

A market in motion



“ The e-commerce market is constantly moving with numerous new developments and initiatives in online payments. ‘Online payments 2011’ is a completely renewed edition that fully focuses on these new developments, both on a global and regional level. The report describes among others the rise of apps, the emergence of continents on the web and the influence of social networks. ‘Online payments 2011’ is a must-read for all merchants and everybody who is involved in the e-commerce and online payments business. ”

Wijnand Jongen, Director Thuiswinkel.org



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Preface

You are reading the report 'Online payments 2011 – A market in motion' that provides an overview of the current state of affairs in online payments, both on a global and regional level.

The first edition was published in 2005 as a Dutch guide for Dutch web merchants. Over the years this report has developed into an international edition with a global focus that has expanded substantially in content. This growth of content has now resulted in the creation of a completely renewed 7th edition. While prior editions included an overview of payment service providers, the growing market has led to the creation of the PSP Buyer's Guide, a separate publication by The Paypers. The theoretical background on e-payments has also been removed from the current edition, but it is still available in last year's report 'Online payments 2010'.

This report consists of two parts. Part 1 presents the general, global developments in online payments, including the emergence of 'continents' on the web, apps, new forms of e-commerce and the persistent problem of fraud. Part 2 looks at the developments in various regions of the world. This part also includes two case studies: online payments in Russia and Alipay in China.

The report is intended for everyone active in the 'transaction services industry', including merchants, banks, payment service providers, risk service providers, scheme organizations and policy makers. With this report we hope to provide both web merchants and payment professionals with a clear insight into the European and worldwide payments industry.

All details concerning payment methods, specific payment products and payment service providers are based on information that was publicly available at the moment this report was written. Although we do not claim to provide a complete description of the market, we do feel that we present an overview of the main and relevant developments.

Finally, this report has been written with the utmost care. If you discover that, despite our efforts, it contains information that is unclear or erroneous or information is missing, we would appreciate it if you would let us know. Feel free to contact us at info@innopay.com.

Amsterdam, March 2011

Douwe Lycklama – Founding Partner Innopay

Chiel Liezenberg - Founding Partner Innopay

Innopay & online payments

Innopay is an independent, full service consultancy firm specialized in payments and related transaction services. It is our vision that:

- Globalization increasingly leads to a network economy. Electronic infrastructures enable industries to cooperate in networks, in real-time.
- (Mobile) Internet is developing into a true transaction channel, creating new transaction contexts. New contexts require new transaction services and new options emerge in existing contexts.
- Transaction services are part of two-sided markets, with sophisticated network effects.
- Development of successful transaction services requires a thorough understanding of the context in which transactions take place. Development is complex and costly and asks for specialist expertise and a specific approach.

Innopay has been active in online payments since 2000. Many of our consultants have acquired hands-on experience of online payment solutions in the last decade. During this period a great variety of online payment solutions was launched, however, the larger part has also been closed down again.

Based on our experience we have created the ‘Innopay Transaction Context Model’ to better understand the success factors for development of online payment services. We serve our customers in three ways:

- We help professionals to ‘structure & understand’ the online payment industry.
- We help providers to ‘develop & manage’ their online payment business, services and products.
- We help merchants and corporates to ‘choose & use’ (online) payment solutions.

In addition to Innopay’s practice in online payment, other key practices include: mobile payment, e-invoicing, e-identity, cards and related rules and regulation. On most of these topics Innopay regularly publishes leading industry reports, which can be downloaded for free from our website.

Innopay is a member of the European Payments Consulting Association (EPCA) and the Payment Systems Market Expert Group (PSMEG) of the European Commission and an associate member of the Euro Banking Association (EBA).

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Management summary

In most markets, online spending is proving quite resilient and in 2011 we are beginning to see significant growth in e-commerce revenues, as confidence in the world economy returns. As e-commerce continues to grow, new channels emerge with consumers and merchants of various types.

The internet as we knew it, one open and global network, has slowly developed into multiple closed networks. Social network sites such as Facebook have fragmented the web into a series of isolated 'continents' with people re-clustering into virtual populations, based on shared characteristics. These platforms have become separate ecosystems with their own users and thereby have become an indispensable channel for e-commerce.

To enhance the user experience and to enlarge their reach many platforms have enabled developers to build applications, or apps, on their networks. This concept has also been adopted by the payments industry: PayPal has launched the PayPal X Payments Platform, MasterCard has launched its payment and data services as an Application Programming Interface (API), and Visa has also opened its network to third-party developers. Notable is the fact that functionality is decomposed into ever smaller parts, each with its own, easy to use app. The exact consequences are not yet clear, but it is obvious that this will have a huge impact on the use of the online channel and e-commerce.

Apps are applied to various contexts in which e-commerce takes different forms. All large online retailers have developed e-commerce applications for smartphones, which makes the smartphone a real 'must-have' for e-commerce (m-commerce). On the television a completely new market is arising with the creation of internet on TV, where video and other paid content is offered to consumers (t-commerce). Furthermore, video-content is used to promote, sell and support commercial products or services through the internet (v-commerce). The market for virtual goods in games and social networks is also well developed (s-commerce).

The emergence of these new e-commerce markets has opened the debate on how to pay for these typically micro transactions. Micro-payments are used for purchases that require impulse decision making and therefore must be easy to use for the consumer. The main problem of micro-payments is the high processing costs. Payments, varying from a few cents to a few euros, can be processed through conventional payment methods, but not in a cost-effective way. To make micro payments mainstream and profitable, processing costs need to decrease.

In addition to the rise of new forms of e-commerce, online retailers face more and more competition from online marketplaces and Person-to-Person (P2P) transactions. P2P refers to a service which allows users to communicate directly with each other to exchange information, products, services, or alternatively, make direct payments to each other. The P2P-payment

model that is offered by companies like PayPal is prospering thanks to large demand from both consumers and merchants, and thanks to other payment methods that were already developed for online use.

Driven by the continuous growth of e-commerce and the increasing share of e-commerce in retail spending, banks are putting more efforts towards the online channel. As consumers constantly demand changes and are turning away from cash, checks and credit cards, it seems that financial institutions have no other choice but to alter services and offerings to keep up with consumer demand for convenience and security. Many new players are aligning to take advantage of the inherent weaknesses in the traditional banking model. These new players are faster, more innovative and better understand the demands of the customer. Many banks focus their efforts towards cooperating with these new players.

Globally, the development of online payments is driven by country specific economic, technological and social factors. There are significant variations in the use of online payment methods across regions, with transactions ranging from small values to substantial sums, initiated via a range of payment instruments and driven by different business models.

Consumers show a growing interest in cross-border online purchases and many retailers are looking to expand their business abroad. However, although the European Commission is striving towards a single market in Europe, serious obstacles in e-commerce maturity and IT development still persist. In spite of attempts to forge a single market from the patchwork of European nations, cross-border e-commerce is developing slowly. The hurdles preventing this single e-commerce market include language barriers, VAT issues and the lack of interoperable payment options. The SEPA payment infrastructure forms the European basis for new harmonized services, such as online payments and e-invoicing, but progress in this context has been limited so far.

In Europe, non-cash payments are definitely increasing steadily enough to warrant investments by banks in new payment technologies, especially as regulation is likely to drive payment usage, either via payment initiatives such as SEPA or through efforts of individual countries to replace outdated instruments. Despite consumer interest for e-banking and the significant number of online initiatives undertaken by financial institutions, most banks have not yet succeeded in determining the financial benefit of such efforts.

Worldwide, cards remain consumers' favorite non-cash payment instruments, accounting in most markets for more than 40% of payments markets and above 58% globally. In 2010 the credit card giants made significant efforts to turn e-commerce into a more integral part of their brand. Visa announced new e-commerce capabilities (Rightcliq) and acquired Cybersource to enhance its role in online shopping, MasterCard bought the DataCash Group to extend its e-commerce business, while Discover will collaborate with Firethorn Holdings.

Alternatives for cards focus on methods that are similar to those offered by traditional payment card systems but at a lower cost to the merchant, or on some form factor innovation that is appealing to consumers. PayPal remains a prominent example of the success of non-traditional payment systems which has managed to gain both revenue and market presence from financial institutions. Other online banking based payment methods as well as a wide variety of non-card alternatives are also gaining ground. In the coming years, while debit and credit cards will continue to dominate online payments, alternative options will certainly develop further to complement card usage.

Merchants clearly support these methods as this is an effective way to reduce fraud associated with cards. Payments through the internet and mobile phones can be made virtually fraud free, but there are still many payment services for which a separate fraud department, fraud trainings as well as fraud detection IT hardware and software are needed. Online fraud and identity theft will remain an issue and merchants must stay vigilant, as they push to expand sales, where, with distance, the risk of receiving an order without getting paid is significantly higher. With the introduction of 3D Secure the fraud situation has improved. However, the consumer experience is still not optimal, potentially leading to abortion of the checkout process by the consumer.

Part 1

General trends and developments



1 Global trends and developments

2010 changed the way we think about how people and businesses engage in e-commerce. E-commerce continued to grow and we saw emerging channels coming to life with consumers and merchants of all sizes. In online payments there is a continuous battle for market share which will continue in the future.

E-commerce sales in the US will keep growing at a 10% compound annual growth rate (CAGR) through 2014¹. Forester Research forecasts online retail sales in the US will be nearly USD 250 billion, compared to USD 155 billion in 2009. In Western Europe, online retail sales will grow from USD 93 billion in 2009 to USD 156 billion in 2014². With these forecasts, the trend for online shopping is still up. This will be facilitated by a growing number of businesses and people coming online.

Credit card networks adopt various strategies to ensure that their role in the payments world remains dominant. MasterCard, Visa, American Express and Discover have ramped up efforts to challenge the supremacy of payment provider PayPal via a series of e-commerce offerings, partnerships and acquisitions. On the other side, eBay's online payments arm also launched some initiatives which are expected to generate more transaction volume. In addition, many technology start-ups such as Zong, BOKU and Obopay are trying to make mobile and online payments easier and thereby also capture market share. There is still room for innovation that will change how we pay and get paid.

Today, PayPal and Amazon are the giants in the e-commerce payments space, with other names, including Google Checkout and bank-controlled entities, such as NACHA, trying to grasp some market share.

In 2010, PayPal tried to enlarge its market share by introducing a number of mobile services: Mobile Express Checkout for expedited checkout, a Mobile Payments Library for quick commerce and subscriptions and a new iPhone app. PayPal X gave developers a chance to evolve their ideas on how to leverage PayPal to monetize their apps across the entire spectrum of platforms and industries. PayPal X provides the resources and the tools needed to change the future of payments, from mobile apps to web apps and social networks. Developers can now monetize their ideas and tap into the USD 30 billion global payments opportunity.

In September, the company unveiled its new micropayments product for digital goods launched on Facebook, which is being touted as having the simplicity of dropping a quarter

¹ Forrester Research - 'US Online Retail Forecast 2009 to 2014', 2010

² Forrester Research - 'US Online Retail Forecast 2009 to 2014', 2010

into an arcade game. The service will allow consumers to buy games, music, and videos in just one or two clicks without ever having to leave Facebook or another merchant's site.

For many retailers, selling online has become a critical component of the business and the acquisition of smaller e-commerce sites that have a proven track record and potential for growth has become a successful strategy. There are some important developments that have helped companies capture new revenue streams and strengthen brand awareness.

Group buying is the new shopping approach which became popular with the emergence of US sites like Groupon, which became operational in 2008. The group-buying sites find local businesses willing to provide large discounts in return for spreading their names to new customers. Consumers log in daily, check out their hometown's deals and either sign up or ignore the deal. Just months after the Groupon concept became popular in the US, China had its own similar websites, with thousands of them offering group buy deals.

The rampant success of Groupon could be stalled by Facebook's decision to roll out a new feature called 'Buy with Friends', which will allow users to share purchases in their update stream with friends. Google is also planning to launch a Groupon alternative, dubbed Google Offers.

Similarly, eBay bought brands4friends, the largest online shopping club in Germany, for nearly USD 200 million in cash. The acquisition will give eBay a boost in Europe where brands4friends has over 4 million users throughout Germany, Japan, the U.K., and Austria. Via its recent acquisitions, eBay looked to boost its e-commerce business, but in the near future, the company will still see the majority of its growth from its PayPal division.

Google acquired social payment provider Jambool, a developer of Facebook applications, for USD 70 million. By selecting Jambool's Social Gold platform, Google aims to enable app developers to provide payment services within their games and other applications during the checkout process. Google has also closed a deal over the acquisition of Slide, a developer of third-party applications, worth USD 182 million.

In addition, Visa has launched a few initiatives of its own in the e-commerce field, including Rightcliq, an online shopping tool designed to provide consumers with a number of tools that aim to facilitate online shopping. The service has been marketed as a social e-commerce service. The tool lets customers involve friends and relatives in their purchasing decisions via email or Facebook, which makes shopping on the web more socially interactive.

Visa also acquired Cybersource for USD 2 billion to expand online payment, fraud management capabilities. The deal enabled Visa to offer new and enhanced online fraud prevention services to merchants, financial institutions and consumers as well as to expand its online payment, fraud and security management capabilities. Via Cybersource's fraud prevention technology, Visa hopes to increase the online use of its credit, debit and prepaid cards.

1.1 The emergence of 'continents' on the web

The internet as we know it, one open global network, has slowly developed into multiple closed networks. Social networking sites such as Facebook have fragmented the web into a series of isolated continents, thus creating a tendency for the web to 'tribalize'. These 'continents' become worlds of their own, dedicated ecosystems which will encourage e-commerce growth. First the PCs, then mobile smart phones, now even TVs and already also PoS devices and other machines are being connected, creating 'the Internet of things'. We are witnessing the equivalence of the emergence of 'continents' on the web, with people re-clustering into virtual populations, based on shared characteristics.

Social networks, online retailers and e-commerce companies divert our attention from the web as a whole. EBay services merchants that sell goods on eBay and eBay's PayPal subsidiary provides payments services to them. Amazon.com is ramping up its payment services and technology offerings to many online retailers. Facebook is much more than a social networking website, it is a platform with over half a million active applications running upon it, with a currency system of its own and a dedicated ecosystem where e-commerce will also take place.

The way people choose to interact with the online channel is also changing which will affect the online shopping landscape. New initiatives in the following fields will have a strong impact:

- **Mobile internet:** more and more people are accessing the internet from their mobile phones, smartphones, PDAs and tablet devices. People will no longer be restricted to conducting their online shopping from their computers as they can also do so from their mobile devices. A potential problem is that individuals may be giving away more information than they realize through their mobile net usage, which raises concerns about privacy.
- **Social networks:** ever more people are using social networks, such as Facebook, Twitter and LinkedIn. Social networks are now becoming marketplaces, allowing for online shopping. This poses a number of issues as, due to their nature, social networks have access to a lot of private information belonging to their members. As the use of social networks continues to grow, we will undoubtedly see this as an on-going issue which will need to be managed.
- **Apps:** many companies are now providing applications (apps) that run on a device (phone or tablet) to enable customers to access their services. A series of online sellers provide their own customized apps to allow their customers to directly access their online shop to purchase goods or services. Some device manufacturers have an open approach to this, allowing apps to interact with other functions of the device. Although this approach allows developers to build their own functions, the approach could increase risk of fraud and create an inconsistent user experience. Other device manufacturers limit or

standardize the capabilities of apps to other functions, leading to lower risk of fraud and a more consistent user experience.

1.2 The 'app era' and the decomposition of functionality

The rise of the web application, or app, built on top of existing infrastructure by independent developers, is a trend that is quickly changing the way things are done online. Notable is the fact that functionality is decomposed into ever smaller parts, each with its own, easy to use app. The exact consequences are not clear yet, but it is obvious that this will have a huge impact on the use of the online channel and e-commerce.

The iPhone or iPad apps are a popular example where third parties can develop programs to offer specific functionality for the iPhone or iPad and the Apple infrastructure. The iPhone has been the main driver, giving rise to a tremendous market for smartphone applications, many of them related to financial services.

The payment industry is experiencing a tremendous change as credit card companies and payment service providers offer APIs for developers to create innovative online payment applications. Initiated by Apple, this business model has been adopted by the payment industry as well.

In February 2010, PayPal launched a developer library for mobile payments. The library is part of the PayPal X Payments Platform, enabling app developers to accept in-app purchases directly via PayPal without having to store customers' personal financial information. Customers will be able to buy something from a merchant's or developer's app without ever leaving the application. The PayPal API allows payments between PayPal accounts to be split or aggregated in any way the developer sees fit thereby allowing for a wide range of payment services.

In the months following the introduction of PayPal X, other payment networks launched innovation labs and open platforms. MasterCard Worldwide launched its proprietary payment and data services as an application programming interface (API) and allowed third-party developers to build new payment applications in May 2010.

Also Visa followed opening their network to third-party developers in fall 2010. Visa is well-prepared to confront its rivals. The company is throwing significant resources behind Authorize.Net, beefing up an existing platform for third-party developers that the company purchased when it acquired Cybersource.

Apps are increasingly being used for online payments. Payment services are developed for online social platforms such as Facebook and Twitter. In 2011, payment platforms are expected to continue their burst to the front of the e-commerce landscape.

1.3 E-commerce takes various forms

1.3.1 M-commerce

Online business models are incorporated into mobile devices in order to maximize revenue opportunities. It is now impossible to discuss e-commerce developments without m-commerce, as these two sectors have become so closely linked.

Mobile devices are more and more becoming an ecosystem for m-commerce, allowing developers to build their own m-commerce applications on the mobile device. Currently all major online retailers are developing e-commerce applications for smartphones. The smartphone has become a must for e-commerce.

M-commerce also continues to draw interest from some big names, including Google and PayPal. The eBay division began enabling mobile payments in 2006, allowing its customers to use mobile browsers to check balances or send funds using text messages. Any merchant in the US or UK which offers Google Checkout as a payment option and supports a WAP-accessible website can accept payments from mobile devices. But most often merchants are reluctant to this idea, because they do not agree to pay fees for mobile transactions.

M-commerce has so far failed to take off, but this is not an impediment for giants like Google and PayPal. Such companies can afford to offer mobile applications, no matter if such initiatives bring money or not. The real challenge is for those firms which only enable mobile transactions and which are struggling to survive until they gain enough users.

On the other side, internet shoppers spent more than USD 2 billion last year through the various mobile applications of eBay. This value is more than three times the USD 600 million spent through the eBay website from smartphone users in 2009.

The entrance of large players, such as Apple and PayPal, to the m-commerce market has led to closed platforms without interoperability, while payment security and privacy concerns still act as a deterrent when shopping on a mobile. The introduction of mobile payments via the so-called Trusted Service Managers (TSM) might prove to be the 'next generation': app stores which work independent of providers or devices.

The e-commerce and m-commerce services have become so dynamic that keeping abreast of the emerging trends has become the main priority. As a result of an increase in smartphone adoption, as well as the development of sophisticated smartphone features such as mobile shopping apps and barcode scanners, this year could see mobile commerce becoming mainstream. More online retailers have already stepped up their game, making available dedicated apps which provide a customized mobile commerce experience.

1.3.2 T-commerce

T-commerce or television commerce is e-commerce undertaken using digital television. TV is going to become the next big internet device, as it allows consumers to have a better sense for the products they are interested in buying. This opens up more opportunities for content developers. Hence, it will come as no surprise that all major credit card companies, large mobile operators and internet giants will try to grab a piece of this pie in 2011.

In China, UnionPay and various Chinese authorities are already planning to draft an online payment standard for Internet TV which is expected to be launched in the first half of 2011. There are two approaches considered for this standard: one is to implant a device like the POS terminal into remote controllers, and another way is to equip digital TV set-top boxes with bank card online payment functions. The payment may be initially limited to small sums, but the service will inevitably boost sales of Internet TV this year.

PayPal is also experimenting with payment methods via TV. One month after releasing its global payment APIs, the company announced a partnership with Philips Net TV for monetization. PayPal also entered an agreement with US-based media company FourthWall Media to roll out a TV-based payments service. The new functionality aims to enable cable operators to deploy applications on their EBIF (Enhanced TV Binary Interchange Format) platforms to allow consumers to access their digital wallet for T-commerce payment.

Although many companies are trying to grab a piece of the t-commerce pie, also new continents are emerging on internet TV. Whereas initially connected TV started as providing merely a gateway to content providers, the market is slowly moving towards more closed models. Apple TV has set the market standard for the store model: content providers have to fully comply with Apple and give away a substantial revenue share in order to gain access to Apple TV users. On the other side, content providers are offered payment capabilities and access to a vast user base. Other companies have copied this model. Samsung (Internet@TV) already operates the same model and also LG (Netcast) is said to follow soon.

TV manufacturers are gaining power in the e-commerce space, by having their own payment systems and disintermediating other internet giants.

1.3.3 V-commerce

V-commerce is the practice of using video content to promote, sell and support commercial products or services on the internet. The video can be downloaded and played or streamed to the viewer. Either way, the video often contains clickable links which can open up a web page or a transaction process.

E-commerce video service provider Invodo has inked a contract with mobile commerce service provider Digby to integrate a retail e-commerce product video within mobile-optimized websites and smartphone apps.

Both parties are collaborating with several retailers, including Golfsmith, to deliver and implement e-commerce video optimized service for viewing on smartphones, via social media websites, such as YouTube and Facebook. In addition, videos have also been optimized for delivery to consumers on the Digby mobile commerce software platform, allowing consumers to view product videos on their mobile device.

The Digby mobile commerce service is set to allow retailers to enable customers to browse and buy items from their mobile phones including iPhone, iPod Touch, BlackBerry and Android-based devices. In addition, Invodo is collaborating with Golfsmith to deliver video content on mobile phones on social media websites, such as YouTube and Facebook.

1.3.4 S-commerce

S-commerce is the practice of selling through social networks. It is only just getting started. Ever more merchants have become aware of its potential and have started to incorporate it into their marketing strategies. Consumers use social media to connect with friends and family and online retailers have started to use this channel to interact with customers and generate more sales. A variety of e-commerce software solutions have thus been developed to enable retailers to explore such opportunities. For example, Payvment, a software start-up that turns Facebook pages into storefront, has helped to set up 250 Facebook retailers on a daily basis.

With more than 500 million active users, Facebook has surpassed Google in webpage popularity in 2010. Therefore, it is only natural for e-commerce to move into this social platform and this natural progression will have a huge impact on the e-commerce industry in 2011. What will make f-commerce different from online commerce? It is the social experience.

The fact that Facebook partnered with PayPal last year is evident proof of its e-commerce ambitions. Furthermore, Facebook plans to make its Credits the only legal virtual currency as of July 2011. Introduced in June 2009, the Credits system allows users to purchase virtual currency that they can spend in all participating apps and games. Developers can continue using other virtual currencies alongside Credits, but Facebook will offer benefits to those companies which use Credits exclusively. Credits is used for more than 70% of all virtual goods bought and sold on Facebook. The social network company takes a 30% cut of all Facebook Credits revenues.

In 2011, these developments are expected to set forth. PayPal is already preparing to launch Shoptimist, a new social shopping service that will enable group buying functionality, in partnership with Facebook. Facebook has already closed an agreement with PayPal under which Facebook members will be able to use PayPal's new application for digital goods to make purchases on Facebook. Moreover, Facebook will also use the PayPal payment service to pay its developer community.

Some experts expect Facebook to turn its Credits into a payments method for goods beyond games, from micro-payments for media to online retail. Should Credits expand into wider e-commerce, Facebook could become a competitor for companies such as PayPal and Amazon.com.

1.4 Virtual goods, the big opportunity

Virtual goods, seen as an effective way to monetize online games, have been driving revenues in Asia and Europe for years. They include items that people buy on popular Facebook games, as well mobile games and virtual worlds.

In 2009, virtual goods started to catch on with US gamers who are willing to pay for virtual goods to help them in their social gaming, while games on Facebook and other social platforms started to generate much revenue. The growing popularity and sales of in-game items, such as avatar customization and virtual gifts, has made the market reach USD 1.6 billion in 2010³.

According to research, consumers are spending more money on virtual goods⁴ and the importance of the iPhone as a medium for online purchases has increased. iPhone owners make up the highest concentration of consumers purchasing digital goods with 44% of them buying apps, games and more, as compared to 28% registered during the previous year. Virtual world users came second, with 41% of regular visitors having bought a virtual item. 33% of handheld gamers and 32% of mobile gamers claimed they spent money on digital goods.

In terms of payment options, credit cards and PayPal are the top preferences, with 51% of buyers saying they used these methods. Notably, 16% of digital goods buyers have used Facebook Credits for payment.

As players are becoming more comfortable paying for items within virtual worlds and social networks, there is huge opportunity for developers with virtual goods revenue models to capitalize on this industry. In the near future, non-physical objects which are bought or exchanged online in games, virtual worlds and social networks are expected to draw more attention from payments-industry players, both large and small. Gamers are going to keep spending money on virtual goods because they are spending time on social media platforms, building relationships and engaging content.

³ Inside Network - Inside Virtual Goods - The Future of Social Gaming 2011, 2010

⁴ Frank N. Magid Associates, PlaySpan - The Virtual Goods Market Penetration and Growth in North America, 2010

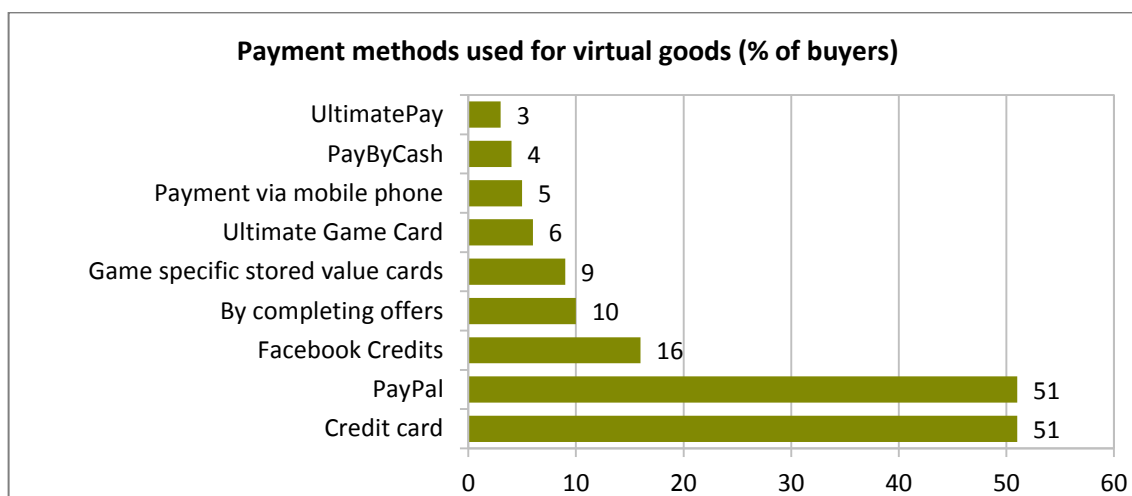


Figure 1: 'Payment methods used for virtual goods' in North America. Source: Frank N. Magid Associates, 2010

The global revenue generated by virtual goods purchases totaled USD 1.6 billion in 2010⁵. By 2015, the number is set to rise to USD 7.6 billion. Despite such growth, fraud remains a very real problem, one that the gaming industry will struggle to overcome.

1.5 Processing costs of micro-payments need to decrease

In the area of micro-payments we find mostly online e-wallets. This is because they form an aggregated value that can easily be subtracted when the actual payment is done. The core problem with micro payments is processing costs. Payments varying from a few cents to a few euros can be processed using conventional payment methods, but not in a cost-efficient way. This is to say, the costs will exceed the payment amount itself. This does not need to be a problem when it occurs from time to time, but for a business model surrounding micro payments to work aggregation almost always takes place, and the aggregated amount is then paid using a conventional payment method like a bank transfer or credit card transaction.

Touted as moribund as recently as a few years ago, micropayments have started to enjoy a renaissance with the popularity of sites such as Facebook and MySpace that offer retailers the opportunity to sell digital goods, a market attracting millions of potential clients. Towards the end of 2010, PayPal has broadened its offerings by launching a new micropayment service for virtual goods. Although the company has had a micropayment pricing structure since 2005, it is now determined to capitalize on impulse purchases of low-priced items.

⁵ Viximo and Virtual Greats - Branded Virtual Goods Market Report, August 2010

Micro-payments are used for quick decision purchases, and need therefore to be simple and convenient for the buyer. In order for micropayment systems to become mainstream and also profitable, processing costs need to decrease.

1.6 P2P payments becoming increasingly popular

E-retailers are facing competition as services based on a Person-to-Person (P2P) model become increasingly popular. P2P refers to a service which allows users to communicate directly with each other to exchange information, products, services, or alternatively, make direct payments to each other.

The P2P payment model offered by services such as PayPal is thriving because of a high demand from both consumers and vendors, and thanks to the methods of payments that are already based on tools developed for the web. The P2P model is also being used in social media as social networks and e-commerce begin to converge.

In 2010, a series of technology vendors and banks have joined forces to introduce P2P payment services which enable customers to send money to friends by e-mail or phone. Such vendors, including CashEdge, Fiserv, S1 Corporation and Obopay, have rolled out P2P payment services as a continuation of the payment applications they already provide.

Mobile money transfer services have come to be regarded as the next phase in the evolution in P2P payments. While mobile P2P payments have been available to US consumers for over 10 years, the broad-based consumer adoption of mobile P2P payments in the US continues to remain low, despite significant advances in handset technology, mobile network connectivity and enhanced user experience. Adoption in some markets is being driven by the lack of banking infrastructure such as ATMs and bank branches, and by the lack of alternatives for cash in emerging markets such as Africa and Southeast Asia.

1.7 Banks more and more active in the online channel

Driven by the continuous growth of e-commerce and the increasing share of e-commerce in retail spending, banks are putting more efforts towards the online channel. As consumers constantly demand changes and are turning away from cash, checks and credit cards, it seems that financial institutions have no other choice but to alter services and offerings to keep up with consumer demand for convenience and security. Banks ought to focus their efforts into expanding their presence across the online channel in order to gain more ground among the internet savvy and young consumers.

Online banking has continued to gain adoption over the past decade and is expected to eventually outrank branch location in the list of decision criteria when a consumer chooses a

bank. But as a result of the multiple challenges within banking, many new players are aligning to take advantage of the inherent weaknesses in the traditional banking model. These new competitors are attracted to new strategies that redefine their businesses or enable them to create new ones that tap into potential profit pools. They are faster, more innovative and better understand the demands of the customer. They are securing devices such as mobile and smart phones enabling information transfer and transactions.

BankSimple, a banking start-up, is such an example. Developed as an alternative to the traditional personal banking, BankSimple is creating a better interface for banking through the web and mobile apps. In partnership with financial institutions which will hold the actual deposits, BankSimple is focusing on creating a better customer experience and simplifying the banking process by unifying all accounts into one, accessible via one bank card.

Financial institutions still need to focus on developing new strategies that promote their online banking capabilities. Mobile banking services could drive the growth in online banking adoption, since they broaden access, increase usage and provide a platform for innovative products and services in the future. One of the main focuses of m-banking is creating access to financial services for the un(der)-banked population in emerging economies. The geographical focus of m-banking is therefore mainly on developing countries in Asia, Africa and Latin America.

The need for banks to monetize their online services is essential in the current economic climate. The mobile channel is becoming increasingly important to the bank's focus on increasing customer retention.

2 Important ongoing discussions

2.1 The paid vs. free online content debate is far from over

When it comes to paying for digital content, either online or via mobile, consumers' attitudes differ, especially if we are talking about various regions and content types.

Online content will play a significant role in 2011. Platform convergence puts content at the center, as consumers look for experiences through whatever channel is most convenient. The broadening of the app model will be important, and marketers must find a way to deliver ads across a variety of devices.

Analysts have questioned whether readers will be willing to pay for news online, since other websites and blogs offer online content for free. According to research⁶, 74% of readers would abandon news websites and search for a free alternative if online publishers started charging their subscribers for online content.

The situation is similar when it comes to US readers: a survey by PEJ and Pew Internet and American Life Project reveals that only about a third can even identify a favorite news website. Of these, only 15% would continue to visit it if that site put up a paywall. Such findings indicate that the majority of online news consumers are willing to browse for news from more than just one website, as they do not have a favorite online news source. Because of this, a transition to paywalls may prove to be more difficult than expected.

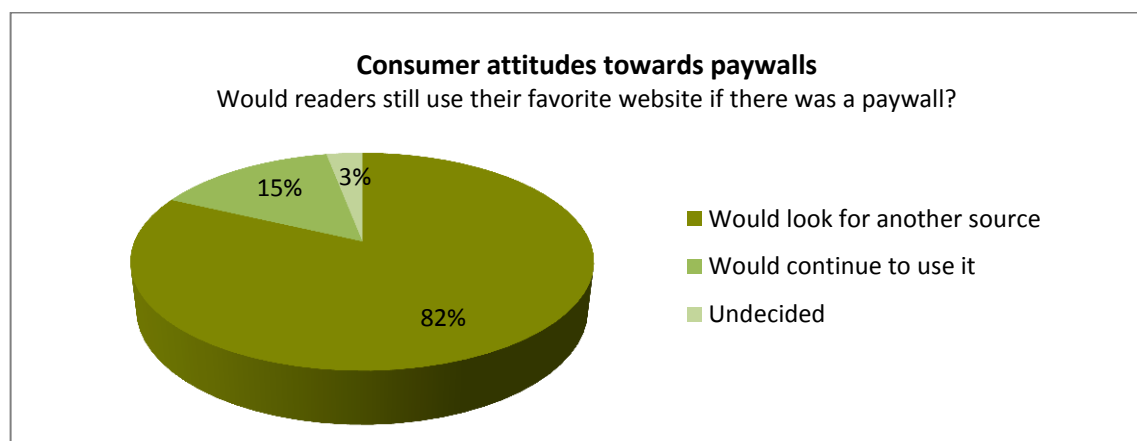


Figure 2: 'Consumer attitudes towards paywalls'. Source: PRC – Project for Excellence in Journalism and PRC – Internet & American Life Project Online News Survey

⁶ Paid Content UK/ Harris Interactive - The Harris Poll Global Omnibus, September 2009

While there is no consensus yet on how newspapers and magazines should charge money, it seems that technology companies manage to keep pace with current market demands, by offering online media publishers both subscription-based and micropayment systems to help them generate revenues and stay in business. Journalism Online, Z-Commerce for Media (developed by Zuora), ZoolahScribe (launched by online services provider Aurumis) and Kachingle are only a few examples.

Companies are experimenting with a suite of payment models, from full service subscriptions to individual transactions, or micropayments. But which proposal will emerge as the winner among online publishers? Some critics are convinced that consumers are used to getting online news for free and will not pay for subscriptions in significant numbers to form a viable business model for journalism. And no matter what payment models readers prefer, online publishers will still have to convince consumers to open up their wallets and pay for online content. And, of course, some of them will pay. But how many and for how long, that is the question.

The phenomenon of content monetization has evoked a wide variety of reactions from the industry. Some online news sites are thinking about putting up a paid wall around their content and monetizing through a subscription revenue model, while others have seen micropayments as a possible option for newspapers online. As more experiments in for-pay content emerge in 2011, questions of what is feasible may begin to finally find some answers. News Corp CEO Rupert Murdoch is pushing forward his content strategy and it seems that he has already found one of these answers. The Times paywall site is doing badly and now Murdoch wants to get into the game with the iPad magazine model. This includes a subscription service for 'The Daily' project⁷ which will allow customers to be re-billed automatically for subscriptions.

2.2 Fraud, a persistent problem

Fraud and the perception of fraud remain important themes in online payments. The most common online fraud is the compromise of shoppers' financial details when used to complete a transaction via the internet. Although most online transactions are conducted without fraud, the well-publicized fraud cases involving millions of card number or billions of Euros worry consumers and merchants alike. The real cost of fraud is not only the sum of money lost in fraud, but also what is spent on prevention as well as the loss of trust in the online channel by consumers and businesses.

⁷ The Daily, a digital newspaper built especially for Apple's iPad

The trend of e-commerce fraud is identity theft in social networks and the infiltration of payment service providers and online merchants with malware. The stolen data is then used to commit fraud. There are two main channels of fraud that merchants need to monitor, namely customer present (CP) fraud (in the store) and customer not present (CNP) fraud, which occurs on the internet or over the phone.

Merchants could suffer an increase in online fraud over the coming years as they struggle to process more orders with the same or fewer resources. On average, 1.9% of 2010 orders accepted resulted in fraud, compared to 1.6% the previous year. Over a third of businesses are expecting to see the percentage of web revenue lost to fraud to grow year-on-year.

North America and the UK continue to face challenges with illegal activity in the online sales domain. Merchants accept more fraudulent orders. In addition, while online sales volumes are growing, there are insufficient investments in fraud.

In 2010, merchants reported an overall average fraudulent order rate of 0.9% for their U.S. and Canadian orders, the same as reported in 2009. Within the past seven years, the average% of accepted orders which turn out to be fraudulent has varied from 0.9% to 1.3%. In 2010, this rate has dropped below the 1% threshold for the second time, which is indicative of the fact that last year retailers have been more successful managing fraud attempts.

Fraud is very often related to the use of credit cards. The reason for this is simply that credit cards were never designed for internet use. The credit card number contains all valuable information (identity and account number) and because many parties are involved in processing these valuable numbers, the use of credit cards is prone to theft and fraud. But fraud isn't exclusively the domain of credit cards: also direct debit and identity theft are important sources.

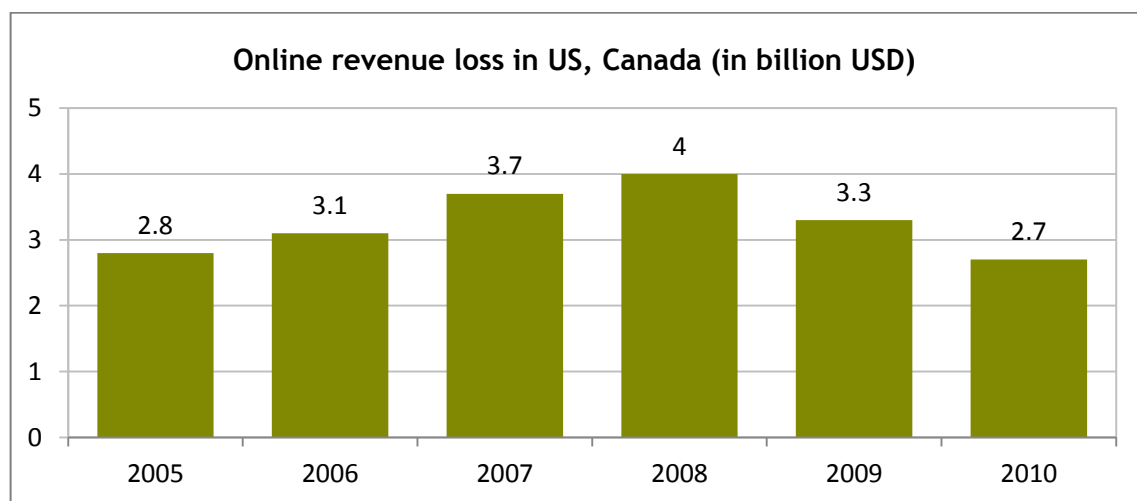


Figure 3: 'Online revenue loss in US'. Source: Cybersource: 2011 Online Fraud Report – 12th Annual Edition

Misappropriated data is used mainly for credit card fraud. Although charge backs provide consumers some protection, with more than half of the affected consumers discovering the fraud only after three months or more, retrieving the funds becomes problematic.

2.2.1 Key trends in online fraud

According to Cybersource⁸, payment risk can be divided into three categories:

- **Fraud:** the risk that payments are accepted due to deceptive information and/or misrepresentation of identity; ('Identity Theft');
- **Credit:** the risk that the customer may not have sufficient funds to settle ('Credit risk');
- **Repudiation:** the risk that the customer fails to honor their payment obligation ('Charge back').

Since 2000, the e-commerce sector has witnessed constant growth (between 15% and 25% per year), which in turn has brought about major challenges for online merchants, including a new 'complexity' in online fraud. This occurs because fraudsters have new tools at their disposal, adapt quickly to new developments and have become organized on a global level. Online business is still growing and becomes ever more international, so does fraud. As an answer, there is a wide array of fraud prevention to secure online sales and enhance conversion rates.

For example, American Express has launched SafeKey, an online fraud prevention service, licensing Visa's 3D Secure Protocol. As a result, American Express is set to integrate 3D Secure for internet payment authentication, joining Visa and other international companies in implementing a technology standard for online payments. 3D Secure is the technology that enables authentication services provided by global payment companies. 3D Secure payments include an electronic signature in the form of a card holder authentication with every transaction. Identity of the card holder is ensured through the PIN-identification. When the transaction is executed with 3D Secure, the liability for chargebacks shifts from the acquirer to the card issuer. In daily business this means that the merchant is no longer fined for the chargeback. Chargebacks are also possible with 3D Secure, for example when the card holder denies to have received the shipment. So this remains an administrative burden for merchants.

In June 2010, Visa Europe made Visa CodeSure available, an application designed to fight online fraud. The new authentication functionality is set to be implemented in- and made available via a new Visa-branded payment card. The card will include an alpha-numeric display, a 12-button keypad and an embedded battery. The Visa CodeSure application is set to prevent

⁸ Cybersource - A Practical Guide to Global ePayments, 2010

any unauthorized use of the card. Thus, the service will require cardholders to enter their PIN every time they perform a new online transaction. Visa Europe has validated the use of its Visa CodeSure technology for Verified by Visa payments, online banking access, telephone banking as well as third party services. Visa CodeSure is compatible with any Visa debit, credit, prepaid or commercial card.

US-based provider of online fraud prevention technology iovation has teamed up with UK voucher-based prepaid online payment services provider Ukash for the delivery of its fraud prevention services to the latter's e-commerce payment business.

2.2.2 Online fraud prevention and detection

Online authentication is an important aspect of e-commerce and online payments. For any payment method it is required that the actual payment is authorized by the rightful user of the funds. This does not mean that the individual himself needs to be identified as in most cases possession or access to the payment method is verified by means of authentication. Pre-paid card, for example, often only require one to enter a numeric code to complete payment. This is one factor of authentication.

In case of online use of a credit card the card number in addition to the expiry date and a security code must be provided. These are all provided on the credit card and are therefore only one factor of authentication. To prevent misuse of the consumers' credit card information by the merchant and for the user's convenience, companies like PayPal act as intermediaries so that consumers only provide PayPal with their card information.

A good match between the payment and delivery methods used given its contexts can already prevent much fraud. For example, when a relation is new and therefore unknown, then for first transactions a guaranteed payment method might be used (e.g. bank transfers). Only when a relation develops over time, a web merchant might decide to use less guaranteed payment methods (e.g. direct debit).

When looking at this from a commercial point of view the reasoning might be opposite: give the easiest payment methods to new customers and accept the risk. Thus web merchants continuously have to balance their risk against costs and ease of use, as we will see in the next chapter. Fraud for merchants can be completely avoided if merchants would use guaranteed payment methods in combination with pre-payment. But that will, most likely, not result in the highest sales.

Fraud prevention is done prior to the transaction. Merchants decide, based on certain criteria, not to accept certain transactions. Fraud management is done at the moment fraud takes place, for example when a chargeback of transaction occurs. Also in this situation there are aspects which can minimize the loss for merchants.

As e-commerce is generating higher revenue every year, a higher fraud rate has led to higher volumes of revenue lost. When it comes to fighting online fraud, there is no 'one-size-fits-all' strategy, given the geographically diffused nature of fraud and markets' varying maturity levels. Different industries, merchants and markets require a customized solution. This is why there is a need to conduct a cost-benefit analysis for each deployment of a fraud prevention tool upfront.

2.3 'War on cash': small steps forward, but also backwards

The use of prepaid cards for online payments has gained further interest in 2010. In general the prepaid value drivers are about improving back office efficiency, controlling expenditure, improving loyalty and, for consumers, the fact that a prepaid card is anonymous and that the value can easily be transferred between people. More and more cases came to market targeting especially the unbanked and the young. Examples are the Ultimate Game Card, the Wallie-card, paysafecard and Ukash. For e-commerce merchants prepaid cards are important for anonymous and guaranteed expenditures, especially the cards carrying the international card scheme logos. We expect this product category to develop further in 2011.

The revolution in payment technologies has facilitated the development of electronic payment systems to such an extent that for years, the notion of a cashless society has seemed to be drawing ever closer. But in spite of predictions regarding the elimination of physical cash as a transaction medium and its substitution with an electronic payments system, coins and banknotes are still used as payment. However, more and more systems present themselves as potentially better alternatives, at least theoretically.

In December 2009, the Payments Council voted in favor of abolishing the use of checks as a means of payment in the UK and has already set a target date of 31 October 2018 to close the central check clearing system. The Payments Council said that over the next nine years it will focus on promoting existing alternatives.

Turning from cash to card payments raises a number of issues, among which lack of privacy and anonymity, as well as exposure to credit card fraud (and to a lesser extent debit card fraud) and phishing attacks. Of particular interest in meeting the privacy concerns related to paying online is the development of 'digital cash'. Their aim is to develop a payment means which provides the benefits of electronic payments systems with the privacy of physical cash. Electronic money, which facilitates e-commerce and is generally used for low value transactions, could lay the foundations for a cashless society.

Innovations in payment systems are changing the payment landscape of many countries, mainly driven by the development of the technology involved in delivering cash-free payments, bringing the possibility of a cashless society several steps closer. Innovative

payment channels, including mobile and contactless, still have to really take off. Such developments are likely to drive competition between financial institutions and payment services providers, as they attempt to provide alternative payment solutions in the move towards a cashless society.

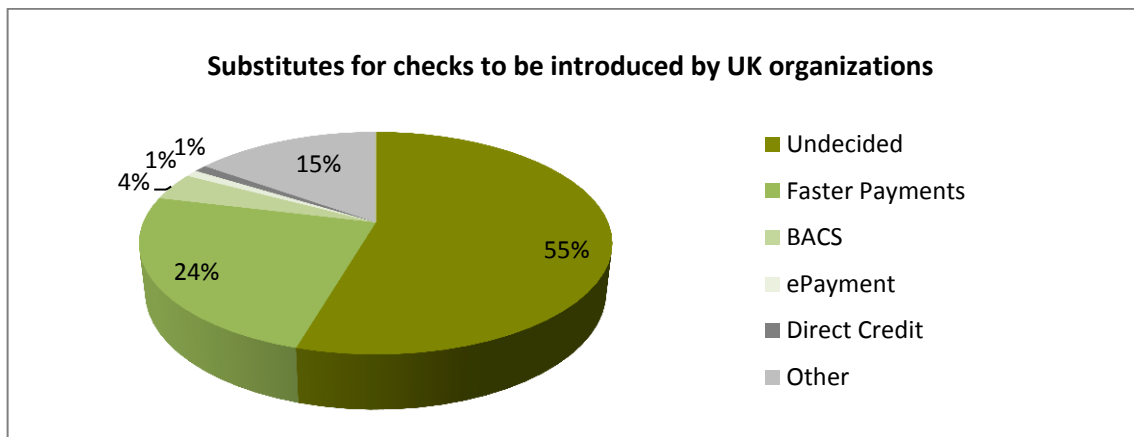


Figure 4: 'Substitutes for checks to be introduced by UK organizations'. Source: a delegate survey conducted at Experian Payments' annual Payment Strategies event, June 2010

Society will probably never be entirely cashless. A '50% cashless' prospect seems more reasonable, as many customers will keep on paying by cash, especially for small purchases, and avoid other payment methods because of lack of trust or traceability..

3 Summarizing...

Online shopping will continue to grow strongly. E-commerce revenues are expected to climb to USD 680 billion worldwide, an 18.9% compared to 2010 revenues⁹.

The market share of cashless payments will continue to grow, partly because of the convenience for customers, but probably even more so because of the convenience and lower total costs for retailers. Due to overall costs, cash handling will become more expensive for retailers and cashless payments cheaper. Yet, the biggest barrier will remain the fear of potential fraud and identity theft, keeping millions of customers from purchasing goods and services online. Addressing these concerns will be a key component in ensuring the continuous success of online commerce both in Europe and worldwide.

In 2010 it has become clear that internet-based financial services, online banking in particular, are no longer a novelty, but rather an established segment of the retail financial services market. This segment has shaped and still has the potential to significantly impact the development of global banking landscape, particularly in very advanced economies such as the US and UK.

M-commerce builds on the advances made by online commerce, but makes the interaction available to a wider audience in a more personalized way. M-commerce, although not fully mature, has the potential to make it more convenient for consumers to spend money and buy goods and services. As the temptation to purchase goods and services is always present, the mobile channel is clearly a technique that can be used to boost revenue. Integration of the mobile channel with the online banking platform represents an important challenge for banks.

2011 will also be the year for social media and commerce, taking root on Facebook. The iPhone has given rise to a huge market for smartphone applications that customers can easily access, many of them being related to financial services.

All these trends and developments should make for a very interesting year 2011.

⁹ JP Morgan senior analyst Imran Kahn

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Part 2

Trends and developments per region



4 Europe: a fragmented and unequal market

The evolution and uptake of online payments in a certain region strongly correlates with the e-commerce growth in that region. The e-commerce market differs widely across Europe and European countries have reached different stages on e-commerce penetration. Each country has its own distinct culture, broadband penetration rates and preferences on how to pay for goods, especially online¹⁰.

In general, Europeans are among the world's most enthusiastic users of the web. As of June 2010, the total number of internet users in Europe alone reached 475 million, compared to 1.97 billion users worldwide¹¹. Hence, Europe accounts for approximately 24% of the world's internet users. Moreover, between 2010 and 2014 the European online population is expected to grow by nearly 20%, with countries such as Poland, Russia, Ukraine and Turkey as the main drivers for such a growth.

In the next years, increased online tenure, improved access and greater promotion by retailers will all result in ever more people visiting e-commerce websites to make their purchases online. The number of online shoppers in Europe will grow from 141 million in 2009 to 190 million by 2014. Also, the average spend per online buyer will increase from EUR 483 in 2009 to EUR 601 in 2014¹².

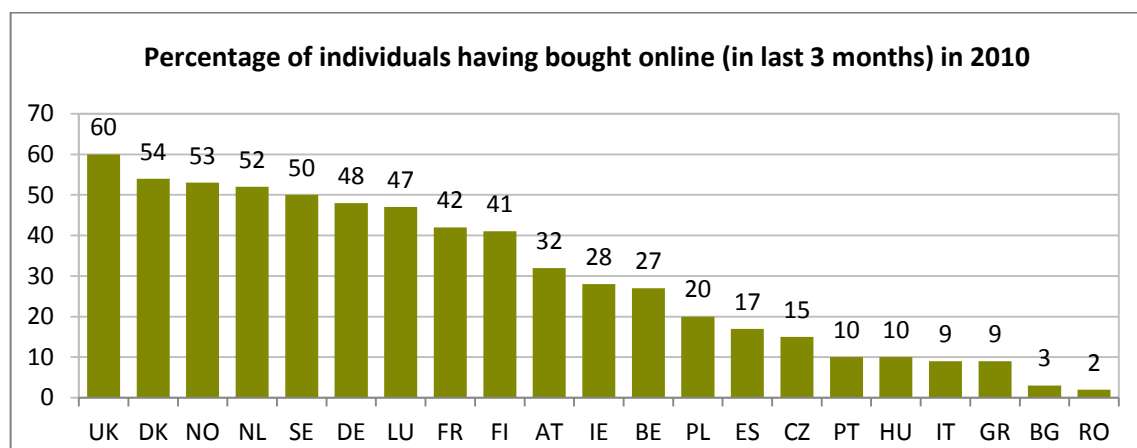


Figure 5: 'Percentage of individuals having bought online in 2010'. Source: Eurostat, 2010

(Note: this is a different percentage from the number of *internet users* that shops online).

¹⁰ The Paypers - Online Paypers, Vol. 3, Issue 22, 2010; Interview with Matthew Silverman, CEO of PayPro Global

¹¹ Internet World Stats, June 2010

¹² Forrester Research, The ForecastView 2010

Currently nearly 60% of internet users in the EU27 shop online; the proportion of e-shoppers among internet users ranged from 79% in the UK to 9% in Romania¹³.

As a result of varied buying habits and differing infrastructure, there are significant differences between individual countries in terms of online shopping activity. It has long been assumed that the UK has the most mature e-commerce market in Europe. And rightfully so: the UK stands out as the world's leading country for e-commerce, with e-commerce revenues of GBP 100 billion (7.2%) per year. This share is expected to grow by nearly 10% annually. About 60% of this total is driven by 'consumption', the amount that internet users spend on online shopping and on the cost of their connections and devices to access the internet. The UK exports are GBP 2.8 in e-commerce goods and services for every GBP 1 imported, while in the country's offline economy, exports account for 90p for every GBP 1 imported. More than 19 million households have an internet connection (a 73% share), while broadband penetration has more than doubled since 2005. UK is undoubtedly the most mature e-commerce market in Europe, however, countries like Germany and France are catching up very quickly.

The growth potential for e-commerce is high in Central and Eastern European countries, despite the relatively smaller size of the e-commerce turnover and lower consumer spending. Poland will witness the highest increase in online sales (up 36%), followed by France (up 31%) and Spain (up 25%), while in UK, this sector will witness the slowest growth (up 12.4%). Nevertheless, this country will command the largest market, estimated at EUR 48 billion¹⁴.

The Polish e-commerce has registered an 18% growth in earnings in 2010, with the sector expected to earn around USD 1.65 million. If online auctions are added, the expected amount is set to reach USD 4.94 million¹⁵. The number of e-stores has seen a 28% growth in 2010 and the figure is expected to continue to grow, with the number of competitors reaching 10,000. Nevertheless, the country's online segment of the retail market currently accounts for almost 2% of total retail sales, while in Germany, France and the UK the figure is 7 to 8% of the market.

The number of internet users in Eastern Europe currently reaches almost 150 million, representing one third of total Europe. As regards the share of online shoppers on internet users, the big Eastern European e-commerce markets show rates between 15% and 25%¹⁶. The share of B2C e-commerce on total retail reaches over 5% in main Western European markets,

¹³ Eurostat: Internet usage in 2010 – Households and individuals, 2010

¹⁴ Kelkoo for the Centre for Retail Research, October 2010

¹⁵ Euromonitor International data cited by Warsaw Business Journal

¹⁶ The Paypers - Online Paypers, Vol.3, Issue 22, 2010; Exclusive interview with YucelYelken, CEO & Founder of yStats.com

while most Eastern European markets are still lagging behind. Czech Republic is a frontrunner in this context, with a share of slightly above 3%¹⁷.

As broadband penetration rates will increase in the future and more global players will enter the region, the e-commerce market is definitely going to move forward the upcoming years. In Western Europe for example, online sales are expected to climb from USD 150.3 billion in 2009 to over USD 202.7 billion in 2012¹⁸.

Hence, there is high potential, but there are also hurdles: those customers willing to make online purchases in another country are faced with language barriers, security issues, VAT issues but also the lack of international or interoperable payment methods.

What does the European market need in order to overcome these barriers?

4.1 Harmonizing the European payments landscape: where do we stand?

4.1.1 Payment Services Directive

On 1 November 2009, the PSD came into force in most European Union (EU) and European Economic Area (EEA) Member States. This European legislation is applicable to all organizations offering or wanting to offer payment services. Many service providers need a license from their national central bank to continue their current activities. This implies new obligations, but also creates great opportunities.

The Payment Services Directive (PSD) has as a main purpose the harmonization of the European payment legislation and an increase in transparency and efficiency of payment systems. As such the PSD is designed to protect the interests of consumers, retailers, companies and public authorities. While the PSD applies equally to banks, it also creates the category of a payments institution, in order to encourage new payment services providers to tap into the market. In order to serve the whole European market, the payment institution needs to take out a license in only one country.

The PSD also introduces regulation on the 'payment institution' to already existing payment schemes such as credit and money institutions. Although a precise definition of a payment institution (PI) is provided, this definition and its transposition into national legislation leaves room for interpretation. It is, however, clear that payment institutions can transfer money, hold payment accounts and grant credit, and are prohibited from taking deposits and issuing e-

¹⁷ The Paypers - Online Paypers, Vol.3, Issue 22, 2010; Exclusive interview with YuecelYelken, CEO & Founder of yStats.com

¹⁸ eMarketer, Retail E-Commerce in Western Europe, 2010

money (Art. 16 §§2-4). Organizations that will start and implement such financial services need a license according to the PSD (Art. 10 §9).

The PSD provides a system of licenses for payment service providers (PSPs), lays down information requirements regarding payment services and lists rights and obligations of both PSPs and users. The aim of this directive is to ensure the user-friendliness, safety and efficiency of payments throughout the European Union / European Economic Area, in particular for credit transfers, direct debit mandates, card payments, as well as for money transfer services.

The UK is the clear front runner in terms of authorized and waived payment institutions. 58 of the 72 authorized payment institutions are UK based and 466 of 467 waived institutions are UK based¹⁹. Over the year 2011, the other countries should witness a substantial rise in registrations, as well.

4.1.2 The Single Euro Payments Area (SEPA)

The rate of change within the total European payments industry is accelerating rapidly under the influence of the SEPA program, which was initiated by the European Payments Council (EPC) that was set up in the banking sector. Under this program the European banks seek to harmonize credit transfers, direct debits and card products across 31 European countries. The SEPA vision is to abandon the concept of cross-border payments and to treat Europe as one domestic region for payments. Every citizen and organization should have access to the same payment instruments all over Europe. This vision was part of the European Commission's Lisbon Agenda, the effort to make Europe the world's most competitive economy.

The SEPA payment infrastructure forms the basis for new harmonized services, such as online payments and e-invoicing. Especially European politicians expect a lot from the societal efficiencies as a result of the further penetration of internet payments and e-invoicing in the coming years. In its 7th Progress Report on the Single Euro Payments Area (SEPA) made public on 22 October 2010, the European Central Bank (ECB) calls on European legislators to take further actions in order to ensure that SEPA is completed successfully.

The EPC have firmly stated that 'Self-regulatory efforts have proven insufficient to drive forward concerted migration to the SEPA project'. As of October 2010, only 9.6% of all credit transfers in the euro area were executed using a pan-European payment instrument²⁰. If the trend continues, it would take as much as 25 years for the SEPA benefits to be felt.

As a response to the slow migration the European Commission's plans to impose a 12-month deadline across the EU for the migration of national credit transfers to the newly-created

¹⁹ The Paypers – Sepa Paypers, issue 3, vol 2, 2010

²⁰ European Central Bank (ECB) data

Single Euro Payments Area. A first reaction came from The Association of German Banks. The association argues that the migration to the SEPA instruments must be made with 'a sense of proportion' and that the deadlines proposed by the Commission are too ambitious and should be extended to three to five years.

There is a general feeling of disappointment in Europe, with the progress made in harmonizing and regulating an integrated European payments market. 50% respondents of a recent survey believe SEPA is not working, as compared to only 24% who think it is²¹. The problem relates to a lack of benefits, bank and corporate resistance to SEPA, as well as limitation by countries through the use of derogations.

Regulatory changes through SEPA and the PSD which are designed to harmonize payments on the European continent are set to impact the European landscape. If SEPA migration is not achieved in a reasonable interval, innovative services, including online payments, will never get off the ground.

4.1.3 'E-SEPA'

The online channel has been breaking down barriers between different geographic markets, but technological developments have also paved the way for the introduction of many different options when it comes to paying for goods and services. Europe is still a patchwork of national online markets, and Europeans cannot enjoy the benefits of a single digital market.

E-SEPA is an opportunity for the e-commerce sector as it has the potential to create pan-European online payment market. E-SEPA refers to both SEPA products being used in online environments and new products making use of the SEPA infrastructure. While SEPA is a bank-to-bank effort, e-SEPA is broader in scope and includes the bank-to-customer channel. Politicians and regulators are putting pressure on the banking sector to innovate 'beyond SEPA'.

The ECB strongly supports the emergence of SEPA-wide online e-payment solutions, such as those that already exist at the national level, for example in Germany, Austria and the Netherlands. The online channel has stimulated the development of new payment instruments. In the Netherlands, the online payment service iDEAL has provided consumers and internet retailers with a safe and user-friendly way of using internet banking for online purchases in web shops, because consumers are directly linked to the online banking website of their own bank.

E-SEPA strongly encourages players in the payments field not to neglect this area and calls upon existing schemes to become interoperable by allowing the exchange of guaranteed

²¹ The Financial Services Club's second annual survey on European payments, October 2010

payments between a payer who is a member of one scheme and the payee of another scheme. At present, there are two main initiatives in Europe. First, the EBA clearing initiative to create a completely new 'e-authorization scheme' that supports all payment instruments (SCT, SDD and cards) using the online banking portal. Second, the initiative of three online banking-based e-payment systems (eps, iDEAL, giropay) to run a 'proof of concept' exercise of interoperability, using the EPC's work on e-payments as the starting point.

In the future, interconnecting national systems might be the solution if a single system is not feasible as it is unable to take into account all the national differences. Many European consumers already have access to online banking and would thus be able to benefit from the availability of SEPA-wide online banking-based e-payment offerings.

4.1.4 Impact of PSD and SEPA on online payments

Banks have to adhere to the rules and standards set out by SEPA and adjust their payment services to comply with the new regulations. Banks have to be SEPA compliant. Those offering payment services will also need to comply with the PSD to continue operations and be vigilant for new entrants into the payment services market.

Web merchants will need to adapt their payment systems and, most importantly, seize the opportunities that SEPA and the PSD offer.

To get ready for SEPA and the PSD web merchants should do the following:

- Ensure that your banks are fully SEPA compliant.
- Make sure you know your IBAN and BIC.
- Make sure your customers know your IBAN and BIC.
- Publish these numbers in your business communication.

SEPA and the PSD create several opportunities and challenges:

- There will be more competition among financial services providers such as banks, PSPs and PIs which will probably lead to lower prices and better service.
- There will likely be more transparency in the costs of various payment methods.
- There will likely be more, as well as more standardized, payment products and value added services available.
- More players will enter the payments market as a result of the introduction of payment institutions as well existing companies starting cross-border operations.
- It will be increasingly possible to centralize European payment operations.
- It is possible to receive and pay funds across Europe from a single bank account. This will most likely boost online banking based payment methods.

- SEPA Direct Debit and e-mandates will enable pan-European online direct debit payment.
- Faster processing of transactions will allow funds to be available quicker.

4.1.5 Proposals to unlock the potential of (pan-European) e-commerce

The internet is extending consumers' access to products across the world, but nevertheless, even though e-commerce is increasing in each country, cross-border e-commerce in Europe lacks behind.

Eastern Europe already has a number of online payment methods, but they tend to be different from those used in Western Europe because of the low credit card penetration and bank cards that, in some countries, cannot be used online. Also, in order to reach Western standards, Eastern Europe needs to solve three main issues, namely the security of online payment transactions, postal service delivery problems and trust in online buying²².

Such issues have attracted a combination of state and business solutions and initiatives which focus on building trust and making cross-border payments easier for consumers. The most important initiatives and proposals initiated by European authorities have been elaborated in the table below:

When	Who	Initiatives/Proposals
April 2010	The European Commission	The ratification of a Regulation block exempting agreements between manufacturers and distributors for the sale of products and services. According to the regulations, manufacturers have the freedom to decide on their main channel of distribution, but in order to benefit from the block exemption; both manufacturer and distributor cannot acquire a market share larger than 30%.
May 2010	The European Commission	The release of a public consultation, asking retailers, governments, telecoms companies and the public to express their position regarding the limited take-off of e-commerce in Europe. The EC invited interested parties to express their point of view regarding the implementation of the Directive on electronic commerce and to the cross-border provision of online services in the internal market.
June 2010	Internet Market Committee	The approval of Pablo Arias Echeverría's proposals to unlock e-trading growth potential in Europe. The report on 'completing the internal market for e-

²² The Paypers - SEPA Paypers, issue 3, vol 2, 2010

		commerce' proposes the establishment of a European trust mark to guarantee the reliability and quality of goods placed on the cross-border electronic market. The European trust mark scheme should be based on EU law, supervised by the European Commission and backed up by standards and enforcement mechanisms at the national level.
August 2010	The European Commission	The launch of a public consultation, asking retailers, governments, telecoms companies and the public to express their position regarding the limited take-off of electronic commerce in Europe.
September 2010	The European Parliament	The creation of a 'trust mark' for websites that guarantee the reliability and quality of goods sold via the internet across borders.. The European 'trust mark' will be implemented in cooperation with existing trust mark labels in Member States and backed up by standards enforcement mechanisms at national level.

Such initiatives and proposals are well-intentioned and in the right direction, yet it may take years until results become more and more visible in the coming years.

4.1.6 Main developments in the region

European e-commerce is expected to reach EUR 203 billion by 2014²³. Given such potential, both credit card companies and alternative system providers are eager to grab a piece of the online payments pie.

When it comes to cross-border shopping, as online spending between European countries is currently being held back by, among others, a lack of consumer trust and a fragmented payments landscape, a series of business initiatives, launched in 2010 and highlighted below, are set to address this problem.

4.1.7 Card-related initiatives

Non-cash payments are expected to increase at a CAGR of nearly 7% within the next four years and reach almost 118 billion transactions by 2015²⁴. Will emerging players in the field manage to keep pace with the industry giants?

In 2010, MasterCard acquired European payment services DataCash for GBP 333 million, in a bid to drive the growth of its e-commerce business in both existing and new markets. With this

²³ Forrester Research, Western European Online Retail And Travel Forecast (2008 to 2014), March 2009

²⁴ Payments Cards and Mobile, September – October 2010, published by PaymentsC M LLP

acquisition, MasterCard aims to achieve several goals, namely to expand its MiGS gateway business currently operating in the Asia/Pacific region towards European markets, drive the global adoption of DataCash's products and services beyond Western Europe and to merge the DataCash-MasterCard fraud capabilities in a single fraud screening and management offer. DataCash develops outsourced electronic payment services, fraud prevention and alternative payment methods.

In addition, MasterCard Europe launched a new debit card strategy for e-commerce that includes the enhancement of the Maestro debit card with a display for more secure online transactions. Turkish bank TEB, a division of BNP Paribas, was the first issuer to offer this display card to consumers as part of the Maestro eCommerce authentication program. The 'Display Card' integrates a small display window and touch-sensitive button, enabling the cardholder to see information on the small visual display, such as account balance, dynamic passcode, current loyalty points balance, list of recent transactions, updated credit/spending limit and the amount of the current transaction.

To tackle the growing problem of online credit card fraud Visa Europe has, on the other side, joined forces with Swiss financial services provider Cornèr Bank to launch the CodeSure card with contactless payment functionality. Swiss consumers can use the payment card in an ATM or point-of-sale device but also for Verified by Visa online transactions. Moreover, organizations can use the card in place of other online log-in systems to access, for instance, online and telephone banking and corporate virtual private networks. The new card features an embedded PIN pad designed to allow consumers to generate a passcode by typing their PIN number into the card.

In addition, the card includes contactless technology, allowing users to purchase low value items for under USD 41 (CHF40) by waving and paying. Such an approach has been interpreted as an alternative to using a password when authenticating online purchases through the Verified by Visa scheme.

In February 2010, Consult Hyperion, the IT consultancy that specializes in the field of electronic transactions, won a competition to run a pilot program that would investigate the benefits of using the Visa CodeSure debit cards to securely access government services online. The project, rolled out in December 2010, tests the assumption that UK citizens will be able to securely and safely access government online services using a Visa debit card with inbuilt secure authentication that can replace the use of password and login details. The card features an alpha-numeric display, a 12-button keypad and battery embedded in the card. When a cardholder enters their PIN into the keypad it displays a one-time password that is used for a one-off transaction and cannot be re-used.

The pilot card program is expected to allow the UK government to enable consumers to enrol and access a wider range of services through the activation of bank-issued Visa debit cards. In addition to Visa debit cards, the technology could also be used in the future with photo ID

driving licenses, National Health cards, benefit payment cards and even some types of pre-paid card for people who currently cannot access financial or government services.

Another company, Barclaycard, a subsidiary of Barclays' global retail banking division, has created SmartPay, a payment processing service designed to enable Barclaycard's e-commerce customers to manage cross-border payments. The payments application is set to provide users with access to a single payment processing system available in several languages and multiple currencies. Moreover, Barclaycard SmartPay is set to include a series of fraud and risk management tools which aim to ensure secure payment transactions.

4.1.8 Alternative payment service providers

One of the most important alternative payment service providers is eBay and its subsidiary PayPal. In 2010, eBay expanded its activity with the launch of an online retail platform in five European countries and Russia. The online retailer's aim is to boost international transactions by enabling buyers to navigate and purchase in their native languages. Thus, online shoppers in Russia, Greece, the Czech Republic, Norway, Denmark and Sweden are now able to make purchases in their native tongues. The company also offers PayPal to facilitate transactions across borders.

The PayPal online payment system is expected to be made available for the citizens of Serbia, FYR Macedonia and Montenegro starting with 2011. Initially, PayPal is expected to allow users in the three countries to use the service only for internet shopping, while local merchants will not be able to charge for their services via PayPal. Nevertheless, later on, more options will be made available, as a result of cooperation with local banks.

In 2010, Moneybookers, another large European player, has rebranded as Skrill. The company operates a payment network that provides users with access to over 100 payment options in over 200 countries. More than 70,000 merchants use the company's payments service, including global partners such as eBay.com, Skype and Thomas Cook. Moreover, the company has registered over 15 million account holders to its eWallet product.

In last year also many new initiatives have been launched. A few examples are highlighted below:

- **Rentabiliweb:** In November 2010, Rentabiliweb, a specialist in audience monetization rolled out OfferPass, France's first sponsored payment platform on Facebook and on the internet. The payment system enables advertisers to sponsor the virtual item the internet user would like to purchase in exchange for an action on their site or on their Facebook applications. In exchange for signing up for a newsletter, completing a form or requesting documentation, for example, web users and online shoppers will receive one or more micropayment codes complementary of the sponsors.

- **Bitcoin.org:** Bitcoin is an open source project currently in beta development stage, created in 2009. Bitcoins, a peer-to-peer digital currency, can be sent easily through the internet, without having to trust middlemen, while transactions are designed to be irreversible.

Bitcoin uses a distributed database spread across nodes of a peer-to-peer network to journal transactions, and uses cryptography in order to provide basic security functions, such as ensuring that bitcoins can only be spent by the person who owns them, and never more than once. Bitcoins are accepted for both online services and tangible goods.

- **Flattr:** Sweden-based Flattr is a micropayment and microdonation system that was launched publicly in March 2010 on an invite-only basis and then opened up to the public in August 2010. Developed by The Pirate Bay co-founder Peter Sunde, the social micro-payment system enables users to click Flattr buttons on sites to share out the money they paid in among those sites. When registering to flattr, they pay a small monthly fee, and then they set the amount themselves. At the end of the month, that fee is divided between all the things the user has flattered.

4.1.9 Payment methods in European countries

Below we present the market share of payment methods per country if reliable studies are available. In those cases where figures are lacking, we give only a rough overview of which payment methods are popular:

- **Austria:** In Austria many online payment methods are used. ELV as well as multibank payment method EPS represent more than a third of all online payments. MasterCard and Visa credit cards represent another third. The remaining third is comprised of many smaller payment services such as Paybox and PaySafeCard.
- **Belgium:** In Belgium consumers primarily use cards and online bank payment methods to pay online. The introduction of Maestro online debit card payments in 2009 is sure to impact the way Belgians pay online. Notably, credit card fraud on the Internet has almost doubled in three years in Belgium, according to a representative of the Federal Computer Crime Unit (FCCU)²⁵. The number of Belgians having their credit cards used fraudulently on the Internet has reached several thousand each year, but exact figures have not been revealed.
- **Czech Republic:** Czech consumers, like others in Central and Eastern Europe, in great majority pay by cash-on-delivery followed by bank transfers and credit cards. E-wallets

²⁵ The Paypers: <http://www.thepayers.com/news/online-payments/two-fold-online-credit-card-fraud-increase-in-belgium-within-three-years/737660-3>

and pre-paid cards are also used. In the Czech Republic, 70% to 80% of online purchases take place via mail order in the Czech Republic. The percentage of other online payment methods used in the country, including credit cards, is insignificantly small. On a comparative basis, the situation in Western countries is reversed, as cash on delivery comes only third in the consumers' top preferences, while the dominant payment method is credit card (for almost 80% of the cases). Banks in the Czech Republic are trying to come up with online systems that allow them to offer online payment and also set a more favorable charge than in the case of a credit card.

- **Denmark:** Credit and debit cards are used for the vast majority of online payments in Denmark (89%). Most of these are via the Danish national debit card Dankort that can be used both offline at points of sale as well as online. In Q1 2009, online transactions made by Danish online buyers with their credit cards reached almost 10.49 million for the second quarter in a row²⁶. In the previous quarter, the number of internet transactions via credit cards reached 10.40 million, while on a year-on-year basis, the number of such transactions for Q1 rose by 11.5%. Other payment methods used in Denmark are online bank payment methods (7%), invoice (2%) or cash-on-delivery (1%)²⁷.
- **Finland:** In Finland online bank transfers (44%) are frequently used to pay online. The services are offered by individual banks such as Nordea, Sampo, OKO and Aktia. This is followed by cards (21%), invoices (21%), cash-on-delivery (9%), e-wallets (3%) and mobile payments (2%)²⁸. Nordic consumers decide on the online payment method according to ease of use, security and price. Thus, credit and debit cards rank highest in terms of their preferences, as a whole, followed by online bank transfers and invoices. In spite of differences in terms of consumer habits and shopping patterns in the Nordic region, the distance selling market is showing sustained growth because of the popularity of online commerce, the wide range of products and services enabled by the Internet and significant customer demand. This is why it has enough potential to become a challenge for companies and customers to get more involved in such activities.
- **France:** For online purchases, the French consumers prefer to use bank cards (including Carte Bleue, private cards or store cards. The number of PayPal account holders has reached 8 million in this country. France is the third European country in terms of the number of PayPal accounts, after the UK (21 million) and Germany (10 million). In Europe there are 52 million PayPal account holders.

²⁶ ehandelsanalyses

²⁷ DIBS Nordic E-commerce Index, March 2009

²⁸ DIBS Nordic E-commerce Index, March 2009

- **Germany:** Credit cards have become the most popular method of online payment among German consumers for the first time²⁹. In preceding years, direct debits stood out as the most popular payment method, followed by giropay, a payment method developed by the German credit institutions which is based on the online banking PIN and TAN procedure. The average online transaction value has declined from EUR 84.31 in the preceding year. German consumers also use online bank payment methods and e-wallets. PayPal is also gaining popularity: in March 2009, PayPal had more than 10 million accounts, as compared to 5 million in February 2007. Also, Ukash has witnessed incredible expansion in 2010, as its business in Germany has quadrupled in only 24 months.
- **Hungary:** In Hungary cash-on-delivery is most often used to pay online followed by bank transfers and credit cards. E-wallets and pre-paid cards are used to a lesser extent.
- **Ireland:** Debit and credit cards are used to pay online. Irish debit card Laser is the most popular, but Maestro and Visa Electron are used as well.
- **Italy:** In Italy consumers primary use credit cards to pay online although cash-on-delivery and alternative payment methods are also frequently used. PayPal hit 4 million accounts milestone in 2010, accounting for 60% of online shoppers³⁰. PayPal is the second most popular online payment method, with a 13% market share so far in 2010 (up 1% as compared to 2009).
- **Netherlands:** Customer preference for iDEAL has increased again: from 44% midway through 2009 to 54% midway through 2010. Acceptgiro comes second (22%), followed by credit transfer (8%), credit card and PayPal (with 5% each) and direct debit (2%)³¹.
- **Norway:** In Norway, cards are the most common way to pay online (61%). Online bank transfers (18%) such as through the multi-bank service BankAxxess as well as invoices (12%) are also used to pay online. Cash-on-delivery (5%) and e-wallets (4%) are much less popular³².
- **Poland:** In Poland the most popular methods of payment are cash- or card- on-delivery and by bank transfers. Bank transfers are often standard credit transfers, sometimes initiated offline, but can also be conducted through one of the many mono-bank online

²⁹ Deutsche Card Services - E-Commerce Report 2010

³⁰ The Milan Polytechnic and presented at the eCommerce Forum

³¹ Currence - research among online shops and online customers - September 2010:
http://www.currence.nl/Downloads/iD_uk_PB_20101005_factsheetiDEAL2010.pdf

³² Currence - research among online shops and online customers - September 2010:
http://www.currence.nl/Downloads/iD_uk_PB_20101005_factsheetiDEAL2010.pdf

bank payment methods. Credit cards, e-wallets and pre-paid cards are used as well but to a lesser extent.

- **Romania:** Romanian consumers primarily use offline payment methods such as cash-on-delivery and bank transfers to pay for online purchases. Credit and debit cards (5%) are rarely used³³. Online payments via bank cards jumped by 38% in 2010, reaching EUR127.8 million, while the number of transactions increased by 82% to 2.26 million³⁴. The number of internet transactions operated via the ePayment system administered by GECAD ePayment International³⁵ reached 2.08 million with online payments worth EUR 121 million. In 2010, the average value of a transaction in the ePayment system stood at EUR 58, as compared to EUR 79 in the previous year.
- **Russia:** Russians still believe in cash. Many of them do not trust banks, while credit cards are rare. Debit cards are mainly used to withdraw salaries from cash machines. Most online payment systems here are mainly developed for the Russian online community: e-wallets, such as WebMoney, Yandex.dengi, QIWI, Kredit Pilot, e-port, moneta, Rapida systems (many of them are processed through Cyberplat and Assist). Some local banks offer online credit card processing services (ImpexBank) and there are also third party payment processors (Chronopay). Ukash sees particular potential in Russia and has invested significant resources in building up a national presence of over 100k issuing points, as well as in partnerships with several e-wallet providers.
- **Slovakia:** Slovak consumers mostly pay by cash-on-delivery followed by bank transfers and credit cards while e-wallets and pre-paid cards are also used. Slovakia and the Czech Republic remain different from the rest of Europe, as shoppers in these countries prefer to pay for their orders upon delivery. Approximately 52% of Slovak online consumers use this payment method whereas two thirds of the overall value of purchases is arranged as payment upon delivery³⁶.
- **Sweden:** In Sweden, cards (35%), online bank transfers (30%) and invoices (28%) have a roughly equal share of the online payments market and together represent over 90% of the online payments market. Cards used in Sweden are the international card brands.

³³ www.thepayers.com, 'Exclusive interview with GECAD ePayment on online payments and e-commerce in Romania', 27 November 2009.

³⁴ Romanian credit card transaction processor Romcard

³⁵ GECAD ePayment International develops and implements e-commerce solutions for Romanian online shops, and international software developers and vendors.

³⁶ SAEC data

Online bank payments are offered by individual banks such as Nordea, Handelsbanken, SEB and Swedbank. Cash-on-delivery (3%) and e-wallets (3%) are also used³⁷.

- **United Kingdom:** Debit and credit cards are most frequently used for online purchasing, with Maestro representing around 10% of all transactions. Other methods such as e-wallets and pre-paid cards are used to a lesser extent. There are 23 million PayPal accounts in the country.

4.2 CASESTUDY: ONLINE PAYMENTS IN RUSSIA

The European e-commerce market cannot be seen as one big market in itself, since there are major differences from country to country. When it comes to online payments, Russia is particularly interesting.

Just like most of the Eastern European internet users, Russians have preferred cash-on-delivery over any other payment option for many years. But starting 2008, Russian e-commerce has steadily increased in terms of e-money users, unlike Europe and the rest of the world. In 2009, the Russian electronic money market reached RUB 40 billion (over EUR 970 million)³⁸.

Credit cards are rarely accepted in online stores and bank transfers are difficult or expensive between Russian banks, so there is a large market for e-money providers who change cash into electronic money using street corner self-service terminals or agent networks in local shops.

The almost complete lack of legislation and accompanying licensing has allowed for very easy market entry for many different e-money service providers. However, the threat of stricter legislation, coupled with the fear of fraud and money laundering and the difficulty of sending payments abroad are some of the obstacles for the future development of this market.

The Russian government is currently fine-tuning the text of a bill designed to regulate electronic payments, The Moscow Times reports. The National Payment System bill will require e-money operators to get a license from the Central Bank, applicable to non-banking credit organizations. In order to get the license, an electronic money operator's equity capital base should be at least RUB 18 million (USD 600,000). Under the bill, the activity of cash payment operators and payment system operators, as well as that of electronic money operators, among other companies involved in payment system operations, will become the subject of legal regulation. The draft bill also establishes the procedure for monitoring in the National Payment System and the respective powers of the Bank of Russia in this sphere. Earlier drafts of the bill required all e-money institutions to obtain a full bank license, but after strong

³⁷ SAEC data

³⁸ The Electronic Money Association, the trade body for electronic money issuers and payment institutions

criticism from e-payment association leaders this was changed. According to Viktor Dostov, chairman of the Russian E-Money Association, cited by The Moscow Times, it is still unclear whether this bill will affect competition in the market as the equity amount might be a problem for new or smaller operators. The final version of this legislation is expected in the summer of 2011.

The majority of online payments in Russia are currently made through online wallet systems such as Qiwi-wallet and WebMoney or with local payment methods such as Yandex.Money. Credit cards are sometimes used but most often in the form of pre-paid, virtual cards linked to an e-wallet.

Developed in 1998 by WM Transfer as a tool for online business, WebMoney is an electronic money and online payment system currently used by customers offering options for exchanging national currency into digital WebMoney. WebMoney accounts, online wallets, are available in eight specific currencies.

Originally developed exclusively for Russian customers, the service has grown in popularity and is now used all around the world. WebMoney is aimed at customers who do not have a credit card or do not want to use it for online transactions. WebMoney strikes a distinctive note from other digital currencies because of the need to download client software to access an account, called the Keeper. This software is able to store the wallet funds, including issuing of invoices, as well as transactions between users. Unlike WebMoney users, other digital currencies such as GoldMoney, E-bullion, e-gold, Loom Gold, Pecunix, iCoins are web-based and users only have to visit the proper URL and log on to use the service.

WebMoney is not alone on the Eastern European market. Competitors include, among others:

- **Qiwi:** Qiwi was established in 2007 by Mail.ru, it has quickly become the largest payment collections operator in Russia with a network of over 100,000 automated collection terminals. It allows users to pay in online shops, but also to pay for utilities, banking services and on major Russian social networking sites.
- **RBK Money:** RBK Money, formerly known as Rupay, this web-based payment system, widespread in Ukraine and Russia, launched in 2002, which offers services to over 250,000 Russian internet users and 6,000 online shops.
- **Yandex.Money:** Users of the Yandex search engine can pay their mobile phone, internet, television, software, utility and insurance bills and transfer funds to other system members without having to download and install any additional programs.
- **iMoney:** iMoney makes use of the same technology platform as Yandex.Money but covers only Ukraine.

- **Assist.ru:** Assist.ru is a multi-banking e-payment system developed by Reksoft which integrates five large Russian e-wallets: WebMoney, Yandex Money, E-Port, Kredit Pilot and Rapida.
- **Cyberplat:** Cyberplat is a multi-banking integrated payment system aimed at customers in Russia, Kazakhstan, Ukraine and Uzbekistan.
- **Moneta.ru:** Moneta.ru is both an e-wallet provider and a PSP focusing on services for smaller online retailers in Russia as well as providing payment services for the gaming and travel industry.

Some of the more innovative Russian banks have also started offering e-payment services at their ATMs as well as mobile/online banking solutions. But as long as there is not a unified system for online banking or easy interbank payments, the e-commerce market in Russia will remain fragmented. As a result of this, and because of the fear for credit card fraud, many customers will still prefer offline payment methods for the foreseeable future³⁹.

³⁹ The Paypers - Online Paypers, Vol 3, Issue 22, 2010

5 North America

5.1 A snapshot of the US payments landscape

Online shopping in the US continues to grow. The recent economic downturn has encouraged US online consumers not only to change their online payment preferences, but also to be more cautious when spending money online, due to the continuation of high unemployment, or their loss of wealth since the financial crisis in 2008.

In 2009, online buyers turned to the internet to look for bargains, but the consumer base remained flat. In 2010, the internet's overall share of total US retail sales remained relatively small, at less than 4%, up from nearly 1.5% in 2003, but its share is likely to grow steadily over the next 5 to 10 years⁴⁰. In the first quarter of 2010, online sales reached USD 36.7 billion, up 14.2% on a year-over-year basis, while during the next two quarters, US retail e-commerce sales remained flat.

But even if the adoption of online shopping has moved at a slower pace, comparing prices, faster buying/selling procedure, as well as easy to find products still remain a great benefit to consumers of e-commerce. In addition, buying online has become a regular occurrence for many types of products. Therefore, e-commerce is expected to maintain its growth in the future, albeit at a slower pace than in the period before the economic downturn.

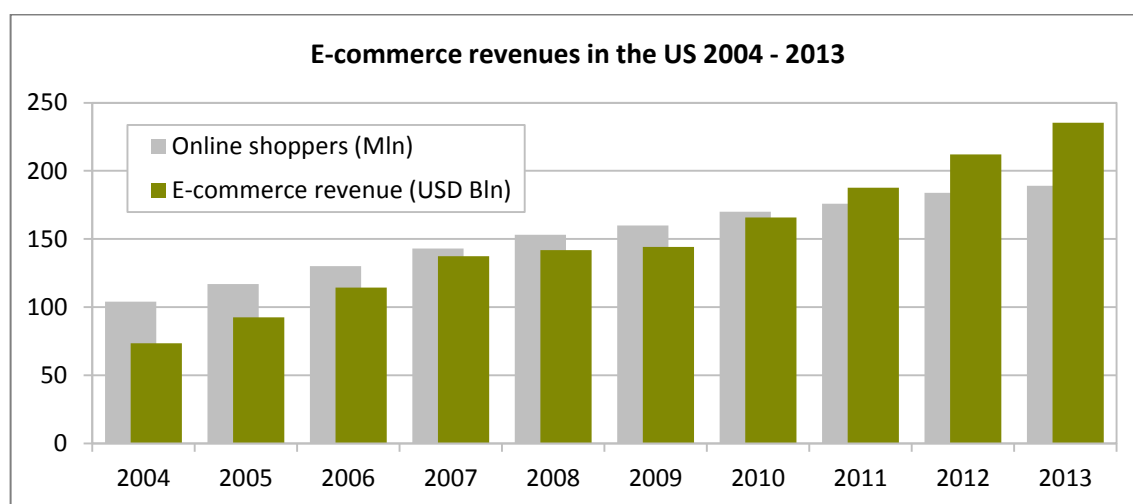


Figure 6: 'E-commerce revenues in the US 2004 – 2013'. Source: The Department of Commerce, Internet World Stats, J.P. estimates

⁴⁰ World Digital Economy - E-Commerce and M-Commerce Trends, 2010

In 2011, internet retail sales are expected to increase by 13.2% to USD 198 billion⁴¹, while in the next three years, they will witness a 12.4% growth to USD 235.3 billion. E-commerce growth will be fuelled by the growing numbers of consumers buying on the internet, increased spending per purchase and more frequent online purchases.

Mobile commerce (or m-commerce) could have a positive impact on the total e-commerce volume within the next years. But in spite of the fact that consumers are increasingly turning to mobile devices to complete their in-store shopping experience, concerns around security issues and ease-of-use are still predominant.

Despite the growing interest in the m-commerce channel, consumers still voice concerns around the security and easiness of the purchasing process⁴². The main worries root around internet non-connectivity, difficulty in proper product visualization, security issues, as well as slow interaction with the retailer website. A survey on consumer preferences and attitudes surrounding mobile shopping indicates that nearly half of participants (the poll involved almost 3,610 US consumers) would prefer to use PayPal as their favorite payments method⁴³.

Furthermore, a growth in m-commerce transactions would also trigger the necessity to develop a fraud detection mechanism capable to cope with fraud-related issues specific to the mobile world. Some forecasts⁴⁴ indicate that by the end of 2013, 12.5% of all e-commerce transactions will be mobile, as a result of the rapid adoption of smartphones.

With more than 90 million active users worldwide, PayPal's total payment volume represents 16.5% of U.S. e-commerce and 15% of global e-commerce. In Q3 2010, PayPal reported a 26% increase in online payment volume growth compared with Q3 2009, a portion of which was attributed to mobile transactions. Over the 2010 holiday shopping season, PayPal experienced a 300% increase in mobile payments volume and ended 2010 with USD 750 million in mobile payment volume.

There is a lot of room for innovation and development in the online payments field. With constantly changing circumstances, new business models are developed and older ones strike a strong comeback, all having a great potential to change the market. We will discuss a few that we consider relevant for the US space, in the context of a change in terms of consumer preferences when it comes to payment methods usage.

⁴¹ JP Morgan senior analyst Imran Kahn, quoted by TechCrunch

⁴² <http://www.thepaypers.com/news/e-commerce/mobile-shopping-gains-ground-among-us-consumers-security-and-ease-of-use-concerns-still-remain-research/741792-25>

⁴³ SmartRevenue – 2010 Shop.org Annual Summit

⁴⁴ Gartner - "Get Smart With Context-Aware Mobile Fraud Detection", September 2010

5.2 Main developments in the US market

As result of the booming e-commerce market, the online payments sector has grown in importance in recent years.

US customers are increasingly turning their backs on checks in favor of electronic payment methods⁴⁵. Electronic payments now exceed three quarters of all noncash payments while payments by check account for less than one-quarter. The growth in electronic payments and the decline of checks are attributed to technological and financial innovations that had an impact on the payment choices of both consumers and businesses. The study evidenced a decline in check writing of -6.5% CAGR, from 33.1 billion in 2006 to 27.5 billion in 2009.

Credit card usage also faded, dropping 0.2%, and were eclipsed by debit cards as the most used non-cash instrument. As more consumers continue to compare credit cards to other payment types, many have chosen debit as their primary payment method. Debit card use jumped by over 12.8 billion payments, reaching 37.9 billion transactions in 2009. By comparison credit card payments dropped 100 million to 21.6 billion transactions.

On the online front, while the credit card remains the most frequently used payment instrument, credit card use for online purchases dropped from 44% of online total payments volume in 2009 to 40% in 2010⁴⁶. The dominance of credit cards in online transactions in the US remained unchanged for a long time.

But as the problems of this method have become a matter of serious concern, competing alternative payment methods have gained grounds. For example, debit cards increased their market share to 29% of total online purchase volume in 2010⁴⁷. Americans use debit cards because this option helps them control spending and also because debit cards are one of the few available payment methods for consumers who have reached the limit for purchases on their credit cards or are unable to qualify for credit. On the other hand, unlike other forms of payment, credit cards offer purchase and return protections that can potentially save consumers money when errors occur.

Non-traditional payment methods such as online alternative payments (PayPal, Google Checkout and Amazon) as well as gift cards, store branded credit cards and prepaid cards have also gained significant foothold and are forecast to continue to grow in the coming years.

⁴⁵ The Federal Reserve - The 2010 Federal Reserve Payments Study

⁴⁶ Javelin Research & Strategy - 2010 Online Retail Payments Update and Forecast: Shift in Consumer Payment Behavior – A Temporary Reaction or a New Reality?

⁴⁷ 2010 Online Retail Payments Update and Forecast: Shift in Consumer Payment Behavior – A Temporary Reaction or a New Reality?

Alternative methods like PayPal and Google Checkout capture 17% of the online payments market, up from 16% last year. Prepaid and gift cards are used for 8% of online spending, up from 7% in 2009, while store-branded credit cards remain constant at 6%. 76% of US consumers currently own an active PayPal account⁴⁸, up sharply from 55% in 2008.

When it comes to the use or the future success of alternative (non-credit card) payment schemes, projections are not scarce. Javelin predicts that credit card use will drop to 37% of online spending by 2015, while the share held by alternative methods will grow to 20%.

In 2009, the online debit purchase volume reached USD 57 billion, as compared to USD 89 billion, representing credit card online purchases. Debit card growth will continue at a significant pace through 2011, while both credit cards and debit cards will demonstrate a CAGR of 13% between 2009 and 2014⁴⁹.

Changing the attitudes of card-centric consumers online is very difficult. The fact that consumers are already accustomed to using credit cards and the existence of already-established networks of retailers who accept credit cards for payment online are undeniable advantages. Nevertheless, an important area of concern inhibiting online transactions remains the security of payment methods, an issue credit card-based methods and even online banking still need to address. But whether the usage of alternative options will mean the complete erosion of card usage in the future (or the other way round), remains to be seen.

The number of online shoppers in the US is expected to grow from 170 million in 2010 to 189 million in 2013, a 3.6% CAGR. In this context, there remains much room for e-commerce growth, as US e-commerce and m-commerce technology companies will develop new tools and applications for the market to keep pace with the consumers' demand.

It needs to be stressed, however, that such prospects will not materialize unless online payment services providers keep constant track of market trends, consumer demands and competition in this challenging market environment. What remains certain is that payment technology manages to keep pace with industry changes and to cover such a diverse range of needs.

5.2.1 Online banking

Where are banks situated in this equation? Unless financial institutions start to innovate, their role will be marginalized. Where once consumers trusted banks with their finances, the credit

⁴⁸ Cardbeat and Auriemma Consulting Group:

<http://www.businesswire.com/news/home/20101227005084/en/PayPal-Grows-Volume-Independence-Auriemma-Consulting-Group>

⁴⁹ Javelin Research & Strategy - Online Retail Payments Forecast 2010 – 2014, February 2010

crunch and the process of globalization have driven a shift in consumer trust away from banks while simultaneously enabling service providers to enter the financial services market. These parties are not banks, but are rather companies with a large consumer user-base that have already established a trust relationship with these consumers. Companies like PayPal, Amazon and Google are used by hundreds of millions of online consumers and are already trusted with payments, shopping, search and email.

In recent years, online banking has enjoyed steady growth in the US, despite the recession and a number of mergers and acquisitions that have reshuffled part of the US banking landscape. A notable example is Wesabe, a company meant to help consumers budget their money and make better spending decisions entered the market in 2006, received two rounds of venture capital financing totaling USD 4.7 million and gathered 150,000 members in its first year. In July 2010, it discontinued its activity, as a result of its inability to maintain customer support and security on a shoestring budget, but also because it was largely overshadowed by competitor Mint. The latter managed to gather 300,000 users and USD 17 million in venture financing in nine months. In 2009, Mint was sold to Intuit for USD 170 million.

Now that the US consumers have a more optimistic perception on the state of the economy, it seems that once again the position of online banking as a mainstream financial service is about to be challenged. Despite the perception that the economy is in recovery, consumers are still cautious when it comes to their personal financial behavior. As online banking customer acquisition growth slows, firms should focus on improving customer satisfaction. In 2010, 70% of respondents involved in a study⁵⁰ reported being satisfied with their primary bank, a marginal decrease versus the previous year. Notably, the percentage of respondents satisfied with their primary credit card institution also dropped by 2%, as compared to 2009.

Online banking services providers now have to shift their focus from customer acquisition and popularizing the use of internet banking as alternative to traditional banking, and concentrate more on the diversification of their online financial services, boosting customer loyalty and consumer confidence in the safety of the online channel. Addressing the consumers' specific demands should become the main element of US banks' new value propositions. Around 58 million Americans (60% of the country's total online population) visits at least one of the top 20 US financial institutions to carry out online banking activities⁵¹.

⁵⁰ comScore - The 2010 State of Online Banking Report

⁵¹ comScore - The 2010 State of Online Banking Report

5.2.2 Online PIN

PIN debit technology, originally developed for ATM networks in the form of the ATM card, and then extended to POS terminals, has the potential for rapid online adoption. For years, the main impediment to using PIN-debit online has been the lack of a solution that would enable entering a PIN without exposing data to hackers.

But PIN debit on the web has been gaining traction since Acculynk entered the market with its PaySecure service. Acculynk service is built on a technology platform that utilizes a graphical, scrambling PIN-pad for the secure entry of a customer's bank-issued PIN. PaySecure provides consumers with the option to use PIN debit on the internet with a software-only service that requires no enrolment or redirection. PaySecure is an optional cardholder verification method for PIN-based e-commerce transactions. When the consumer's debit card is issued by a financial institution that has enrolled its cards in the PaySecure service, PaySecure will appear as a payment option at an enrolled online merchant's checkout screen. The solution makes a general phishing attack difficult because several unique attributes are displayed during the transaction, including merchant branding, financial institution identifiers and the VeriSign Secured Seal. The service was introduced in March 2009 in a pilot program that included ACCEL/Exchange and a number of small merchants.

So far, Acculynk has signed nine network partners, five processors and sales organizations, and has also closed a deal with MasterCard. As a result of this agreement, almost 8,500 US Debit MasterCard issuers are able to offer Acculynk's PaySecure service to their cardholders for online purchases.

In July 2010, Pulse, an EFT network with nearly 4,400 member financial institutions, also rolled out an online PIN debit service, dubbed Pulse Internet PIN Debit.

In September 2010, CardinalCommerce announced the Universal PIN Debit Solution (UPDS), as part of its Centinel service, which enables merchants to accept alternative-payment brands independent of online-payment gateways.

Internet PIN debit might strike a chord with consumers, since it provides a viable alternative for those who prefer debit or have limited credit. In addition, it is a familiar payment method: consumers pay with a card they already have and a PIN they already know. For merchants, online PIN debit brings advantages from a financial point of view, as it increases revenue by tapping consumers who avoid shopping online due to fraud-related concerns.

5.2.3 Alternative payments in the US market

As the payments industry continues to spawn new online payment technologies, many analysts are watching the development of alternatives in the payments industry, seen as the direct result of faltering economic conditions and the fact that online shoppers show consistent demand for non-credit card options. Lower credit limits, higher fees, interest rate

growths, debt-related fears and greater perceived security are only some of the reasons which justify such a shift in consumer preference.

Different demographic groups tend to gravitate around different payment options. And while alternative payment methods certainly appeal to the under-banked and un-banked, all types of consumers including those that hold credit cards, are adopting convenient alternative payment methods. Alternative payments are also the answer to merchants' quest for a mechanism that would lower shopping cart abandonment rates, payment processing fees, and raise the appeal of online shopping to specific consumer demographics. As a result, online retailers have started to reduce reliance on credit cards as the main source of payment.

In spite of the availability of numerous traditional payment choices (credit and debit cards) at checkout, alternative online payment platforms such as PayPal, Amazon Payments and Google Checkout, continue to gain market share, to the detriment of the incumbent players in the payments field. According to industry observers⁵², there are two main factors which have contributed to the growth of these alternative payment options: the promise of lower costs for merchants and the 'portability' of online payments, which enables consumers to checkout with a single user name and password, without the need to disclose credit card details.

Industry experts have been vocal about the growing popularity of alternative payments to the detriment of credit cards, which has resulted in an increasing perception that there is a ready market among merchants and consumers for alternative payment methods.

Alternative payment services will more than double their volume between 2010 and 2015⁵³. Nevertheless, credit cards are expected to remain dominant in online payments landscape for at least the next five years, but they will lose share to debit cards, alternative payments, prepaid and gift cards. Thus, credit card volumes will jump from USD 99.9 billion in 2010 to USD 163.6 billion in 2015. Still, their share of online purchases will drop from 40% in 2010 to 37% in 2015. By 2015, debit cards will hold a 28% market share, little changed from 28% in 2009 and 29% in 2010, but in five years, their volume is expected to climb from USD 71.8 billion in 2010 to USD 124.4 billion in five years. Online prepaid card charges will jump from USD 17.7 billion last year to USD 38.9 billion in 2015, while gift cards will grow from USD 1.7 billion to USD 8 billion.

In 2011, the loosening of credit, which is expected to start rebuilding sales and share for credit cards, could cause the rate of growth for debit card sales to drop slightly by 2014.

⁵² Mercator Advisory Group - Alternate Payments: Disruptive Technology or Just an Online Ally for Traditional Payment Providers?, 2010

⁵³ Javelin Strategy & Research - 2010 Online Retail Payments Update and Forecast

But given such changes in consumer preferences and their rising expectations, do merchants manage to keep up with their demands? Apparently, the answer is 'No'. Not only have they failed to keep pace with the consumers' demand for alternative payments but merchants are also out of touch with the way shoppers are currently making payments online⁵⁴. Furthermore, there is a discrepancy in the percentage of consumers using alternative payment methods (over 50%) and the percentage of merchants who actually make such options available at checkout (only a third of merchants offer such services, including PayPal, Bill Me Later, Checkout by Amazon, eBillme or Google Checkout).

With online shoppers limiting their credit card use and relying more and more on other options, the demand for alternative online payments is on the rise in the US. But if merchants are not aware of the broad mix of payment methods that online buyers are already using, chances for alternative payments to win the battle against credit cards are strongly diminished.

The increase in popularity of non-credit card payments has been attributed to consumer concern at a time of continued economic trouble. Will consumers return to higher usage of credit cards, as a result of an improving economy? Will credit cards ever regain their former pre-eminent place in the US electronic payments landscape? Such questions have a wait-and-see response. What is certain is the fact that the market share of card-free payment options will continue to grow, but not at the same speed. The battle could be far from over.

There are a number of payment initiatives:

- **Secure Vault Payments:** An online payment network developed by NACHA, The Electronic Payments Association, and eWise, enables consumers to initiate online payments via the ACH network by automatically directing consumers to their banks' online-banking websites to authorize transactions. Although other companies like eBillme share some of its features, Secure Vault Payments has one big advantage: favorable pricing, as compared to fees merchants pay for most credit and debit card transactions. The payment method has vast potential and if it proves to be a success, it may take away market share from credit cards and alternative payment methods, thereby greatly impacting the payments marketplace.

After a pilot started in 2008, NACHA's Secure Vault Payments program, officially became a commercial product in September 2010. As the pilot failed to inspire banks, which at that time had been hit by the economic downturn and thus discouraged from investing in new technology, the electronic payment association started to reorient itself towards other niche markets, such as higher education, or non-profit organizations, in order to develop the SVP payment technology. Thus, it did not take long to find a niche among a

⁵⁴ Javelin Strategy & Research - Online Alternative Payments: A Merchant vs. Consumer Divide, October 2010

series of colleges and universities (The University of Georgia, The Auburn University and Columbus State University) which now use it for tuition and fees collection online.

Recently, US Bank, Avidia Bank, payment processing services provider USA ePay, US provider of ACH processing services Checkgateway, payment processing services provider JetPay and consultative payment services provider MerchantPlus Enterprise Solutions (MPES) have also joined the Secure Vault Payments network.

In July 2010, eWise, who oversees all sales and marketing activities, completed a funding round from the three major markets, Asia/Pacific, Europe and North America resulting in USD 12.1 million. The company revealed plans to use the funds to accelerate the US rollout of Secure Vault Payments. eWise will also launch and support operations of an online banking e-payment network in the UK and also expand the online Personal Financial Management division in the UK, China and Asia Pacific.

- **PayNearMe:** Broad distribution networks, often via agreements with convenience store chains, money service networks, as well as targeting of key merchants and reasonable consumer costs are the main factors driving the adoption of cash-based alternative online payment methods.

PayNearMe is one of the companies which in 2010 have rolled out a payment system, enabling unbanked customers to pay for goods purchased online with cash. Earlier last year, online payment services provider Kwedit revealed plans to launch a payments service designed to enable users to pay for their online purchases with cash at a local store. Dubbed PayNearMe, the payments tool incorporates such functionalities as global remittances, bill paying, catalogue shopping and virtual goods purchase for social media games. To be able to pay for online products, consumers have to select PayNearMe as the payment option and then print a PayNearMe slip and take it to their local 7-Eleven store. Further on, the sales associate will scan the barcode on the slip and take the payment, signaling the website that the payment has been made.

PayNearMe has recently rolled out a mobile payments application for consumers who prefer to pay with cash for their e-commerce purchases, loan re-payments as well as refund their e-wallet. With the new service, consumers will be able to complete transactions using their mobile devices and the new PayNearMe card. Available at more than 6,000 7-Eleven stores across the US, the PayNearMe card is set to enable mobile cash payments in any amount from USD 0,1 to USD 1,000.

- **paysafecard:** In 2010, paysafecard, a provider of payment processing services, has made available its prepaid voucher for internet payments in the US. The voucher, which is available in denominations of USD 10, USD 25, USD 50 and USD 100, features a 16 digit PIN code needed to complete a transaction. The amount paid is then debited from the paysafecard balance, which can be checked online. The vouchers can be bought at

300,000 outlets in Europe, Latin America and now in the US. Last year, the company joined forces with Netherlands-based payment services provider GlobalCollect to expand the coverage of paysafecard on the Latin American market.

- **PlaySpan:** PlaySpan, a US provider of monetization services for online games, virtual worlds and social networks, had a busy year. The company launched the Monetization-as-a-Service platform and UltimatePay Mobile, a virtual currency and micropayments monetization app for smartphone platforms, was selected by Facebook to expand the distribution of its Facebook Credits worldwide and as a result, Facebook members can use PlaySpan's UltimatePay service in order to make payments for the Facebook Credits that they want to purchase. Working with PlaySpan, Facebook adds more than 20 new payment options for the Facebook Credits, with new services to be rolled out over the next months. PlaySpan also entered a partnership with PayPal to incorporate PayPal X, an open API designed to enable developers to integrate PayPal into third-party applications, into its recently-launched Video Monetization platform. Thus, PlaySpan customers will be able to use their PayPal account to make in-video micropayments for the purchased virtual content.

PlaySpan's UltimatePay powered MaaS platform combines a global payment gateway with over 85 payment options with micropayments, subscription and e-commerce capabilities, an analytics dashboard and fraud management tools, all integrated into a PCI and SAS-70 compliant hosted service.

According to data released by PlaySpan on its digital goods purchasers worldwide, Australian gamers generate the highest average revenue per paying user (ARPPU) at USD 24.38, followed by US and Dutch gamers, with USD 22.76 and USD 22.03, respectively. In terms of revenue percentage, US ranks highest (42%), Germany comes second (23%), followed by Italy and Canada, each with 4%. The findings also indicate that the top five countries by customer percentage are Germany (29%), US (22%), Italy (9%), Brazil (4%) and Spain (4%).

The company is on the right track towards revolutionizing the e-commerce industry by leveraging both online/mobile gaming and social networks on its platform.

- **Allopass:** The market for virtual goods in the US is estimated to increase to USD 2.1 billion in 2011, up from USD 1.6 billion in 2010⁵⁵. Driven by the tremendous recent growth of social networks and online games in the US, Hi-media Payments, the micropayments division of French Hi-media Group, has opened an office in San Francisco to make its Allopass micropayments platform available to US customers.

⁵⁵ The Inside Network, The US Virtual Goods Market 2010 - 2011

Allopass currently processes more than eight million transactions per month and boasts one big advantage: it supports multiple payment options, ranging from mobile payments, home phone billing to third-party pre-paid card offerings. Hi-media Payments collaborates with companies selling virtual goods and other digital content, including developers of social games, MMOs and virtual worlds (for in-game items), social networks, media companies, streaming media, document downloads and dating sites.

- **eWalletXpress:** E-wallet services provider eWalletXpress no longer operates on the US market, after a Federal warrant was issued to seize their funds.

eWalletXpress joins a list of other international companies, like Neteller/Neovia and Moneybookers, that do not provide services in the US. Through the e-wallet application powered by eWalletXpress, consumers had the ability to make gambling deposits as well as ship their funds into various gambling sites such as EwalletXpress casinos, poker rooms and sportsbooks.

Online gambling in the US is illegal in certain states and US legislation about online gambling has been very unclear. The Unlawful Internet Gambling Enforcement Act, which came into effect in 2006, prohibits any person engaged in the business of betting or wagering from knowingly accepting payments in connection with the participation of another person in unlawful internet gambling. The act does not specifically prohibit online gambling, or which gambling activities are lawful and which are unlawful, but it outlaws financial transactions involving online gambling service providers..

5.3 America's start-up-fever: new players enter the arena

In the payments world, innovation results from the integration of new technologies which are expected to transform the payment and shopping experience in ways that promise to bring great benefits. We profile some innovative young companies poised to grab our attention in 2011 and which hope to mark their way in a competitive industry, by offering businesses and consumers a more efficient alternative to credit cards:

- **Braintree:** Braintree processes electronic payment transactions, including those made via credit, debit, electronic check, electronic funds transfer and alternative payment methods. Braintree's solutions include the merchant account for credit cards and ACH, payment gateway, credit card storage, risk and fraud solutions and rate management.

Braintree processes all the major card brands; Visa, MC, Discover, American Express, Diners Club and JCB from anywhere in the world. One off transactions, recurring billing transactions, verifications and refunds can be processed using the company's Control Panel or API. With Braintree, merchants can accept payment in 134 local currencies and choose to settle in up to 21 different currencies.

- **Dwolla:** Dwolla is a payment processor, currently available only in the US, which provides a free web based software platform that allows users to send, receive and request funds from any other user.

The company has officially announced its payment service in May 2010, offering merchants the ability to have customers pay in 'Dwollas' or virtual currency. Its electronic cash platform has been designed for both online and mobile use.

Set to operate in and outside a user's social networks, Dwolla's peer-to-peer payment platform merges with Facebook's and Twitter's APIs to tap into linked communities in order to create personal cash sharing and spending networks. The platform allows individuals to share money with their Facebook friends and Twitter followers, regardless of whether these contacts currently have a Dwolla account setup yet. Thus, the recipient's money will be made available when the receiving individual registers a Dwolla account and links to the online community where the funds were originally sent. Dwolla's peer-to-peer payments platform is compatible with mobile applications designed for the iPhone and Android operating systems.

Dwolla's main advantage is its maximum transaction cost (25 cents per transaction), while PayPal transactions, as well as credit-card payments, incur fees based on a percentage of the transaction amount in addition to a transaction fee.

- **Jumio:** Jumio is a new start-up for online payments that will be launching a universal transaction service for both individuals and businesses in early 2011. The company is using authentication technology licensed from two Israeli individuals and is focused mainly on mobile payments. Jumio is currently in stealth mode.
- **Payvment:** Payvment is a start-up that allows anyone to create and operate a retail storefront on Facebook. The company has developed an application which makes use of PayPal's Adaptive Payments APIs and is built on the company's shopping cart Web service that turns any online page into an e-commerce page. Customers can make purchases from multiple storefronts throughout Facebook, paying with a single checkout using PayPal. Some of the service's features include universal shopping cart, shopping discovery and search tool as well as the ability for users to add storefront comments and reviews.

Since November 2009, when the company launched, over 40,000 businesses and individuals have started to sell goods on Facebook and over 500,000 Facebook users have shopped for products in stores using the Payvment app.

- **Twitpay:** In February 2010, an investment group led by Acculynk's CEO Ashish Bahl acquired the social payments start-up Twitpay. At that time, the investors revealed their intentions to initially focus on raising money for charities. To make a payment, the donor has to re-tweet the message. By doing so, the money transfer will be authenticated from the donor's account to the non-profit's. Twitpay retains 5% of each transaction whereas the non-profit receives its money within 72 hours.

The investors did not give up on P2P payments, as they were also planning to expand to other products and other social networks and allow users to make online purchases using the service. But as the company failed to gain traction in the P2P payments space (the Twitpay service directs users to PayPal to settle their debts), it has shifted its focus towards other niches with greater potential. In December 2010, Twitpay partnered Zeevex, an InComm subsidiary providing open virtual currency, for the launch of Zeevex Social, a social network payment service designed for the online gaming market. Through the new deal, Zeevex will be able to provide its online game publishers with social network payment services powered by Twitpay. In addition, online gamers will be able to make payments for purchased virtual content through their mobile social network service.

- **WePay:** WePay is the 'anti-PayPal' which makes it easy to collect and manage money online. Unlike its competitors, WePay allows users to keep their group's money in a dedicated account, and to share this account with their group.

The service enables groups to collect, manage and spend money. Users can create free FDIC-insured accounts, from which they can send electronic bills (which can be paid with bank accounts or credit cards) and spend funds with a WePay VISA prepaid card, paper checks or electronic transfers. Clubs, organizations and associations can use WePay to send bills and collect money, solicit donations and send reimbursements. WePay gets a commission from each payment: either a flat 50 cents or 3.5% of the total, depending on whether users are paying with their credit cards or bank accounts.

The company is backed by investors and payment entrepreneurs, including August Capital, Max Levchin (the founder of PayPal), Ron Conway (early investor in Google, Facebook and Twitter), Eric Dunn (former CTO and CFO of Intuit).

PayPal already allows users to request money from groups of friends. Its online services, however, are designed primarily for e-commerce, which makes up the bulk of PayPal's transactions. With PayPal, the account is linked to the customer's name, without a way to separate the payments associated with a group, while on WePay, one can create a unique, FDIC insured account for each group.

In August 2010, WePay integrated its payments platform with Facebook. As a result, the implementation is Facebook users can collect money online for events, reunions, fundraisers, wedding showers, clubs and fantasy football leagues. Customers can access WePay's Sell Tickets application to sell tickets for any Facebook Event, while the Collect Money application enables users to collect money from members of any Facebook Group.

WePay also completed a Series B funding round, gathering USD 7.5 million worth of capital. The company plans to use the funds to expand its presence on the market, build out operations as well as its engineering infrastructure.

- **WingCash:** WingCash is a payment technology start-up which has developed a payment platform that allows individuals and businesses to pay one another with cash in the form of electronic coins and bills. A WingCash Note is an electronic form of currency that can be used via the WingCash website to pay for the purchase of personal, family and household goods and/or services. The holder of WingCash Notes may transfer possession to other WingCash users. WingCash Notes are usable at any participating merchant and are transferable to other WingCash users. Customers can also send their Notes to another WingCash user or any individual that has a Facebook, Twitter or LinkedIn profile.
- **Youlayaway:** In January 2010, Youlayaway, a US start-up, announced the beta launch of an online layaway payment platform, which enables consumers to make online purchases with an alternative layaway payment option.

Such technology allows members to choose the products they wish to layaway and set up a payment plan through Youlayaway. By selecting either monthly or bi-weekly payments for purchases, members can customize their payment plans. A layaway plan can be 2-6 months long, with a maximum of 13 payments. The US start-up automatically deducts the scheduled payments from the customer's bank account via ACH. After payment is made, the item will be shipped directly from the store.

5.4 The Canadian market

5.4.1 Payment methods for online shopping

For years, the dominance of credit cards in online transactions remained unchallenged. However, changing market trends have created new opportunities for alternative (non-credit card) payment methods and practices, which have made rapid headway among consumers and merchants.

In the Canadian market, which is only about one-tenth the size of the U.S market size, online businesses and consumers have faced limitations when it comes to paying online. The banks have created an environment where almost all online sales are by credit card⁵⁶. Credit card volume continues to grow but at a slower rate than debit, while online banking is now firmly established as the primary method employed by Canadians to carry out banking operations. In 2010, 45% of Canadians carried out financial transactions online, compared to 35% in 2008⁵⁷.

⁵⁶ The Paypers - Online Paypers, Vol.2, Issue 22, 2009

⁵⁷ The Canadian Bankers Association, July 2010

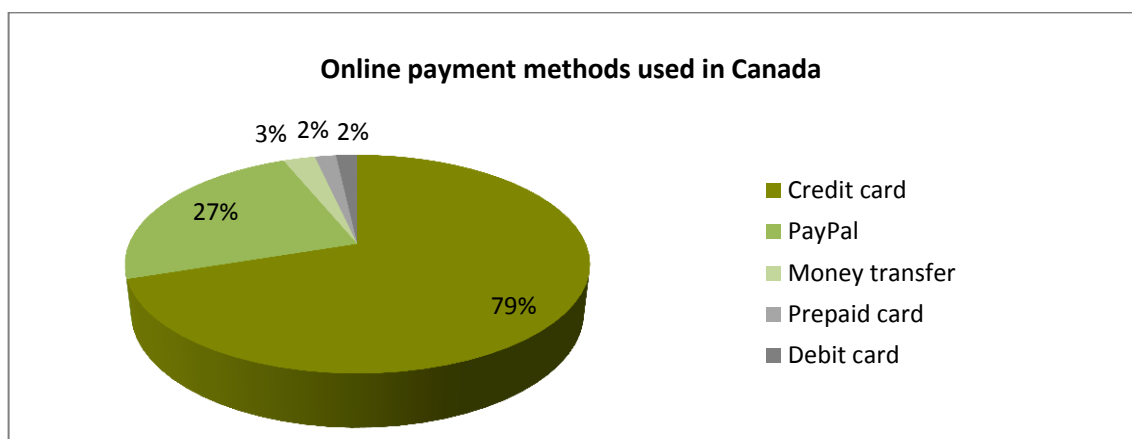


Figure 7: 'Online payment methods used in Canada'. Source: Nielsen Canada – 'Online shopping', 2008

Overall, the Canadian banking landscape continues to show a certain degree of fragmentation when it comes to the main preferred methods of conducting financial transactions. Thus, 23% of Canadians continue to rely on ABMs (automatic banking machines) to do their banking, while the same percentage of consumers (23%) prefers to visit bank branches for the same purpose⁵⁸.

As far as the bill payment market segment is concerned, the supremacy of online bill payments is more pronounced: 45% of Canadian consumers choose to pay bills online, while only 19% of them resort to pre-authorized debit or credit transfers and 12% visit a bank branch to carry out bill payments. A small number of Canadians pay their bills via ABMs. When it comes to routine transactions the internet is Canadians' preferred banking channel. But for major transactions, such as a home loan, consumers would rather visit a bank's branch, and only a small percentage would turn to the internet.

Just like their US counterparts, Canadian customers are still reluctant to conduct their financial management transactions via the mobile channel. In fact, 51.2% of US respondents and 60.3% of Canadian participants involved in a research⁵⁹ claimed that they did not trust the security of mobile banking, compared to the 21.7% of US and 26.3% of Canadian respondents lack confidence in internet banking. Canadian consumers favor internet banking overall (49.4%), which is 10 percentage points higher than US customers. Nevertheless, for major transactions, both Canadian and US consumers prefer branches (76.2% in the US, 85.2% in Canada), with internet banking following at 21.1% for the US and 11.9% for Canada.

⁵⁸ The Canadian Bankers Association, July 2010

⁵⁹ Empathica – The Empathica Consumer Insights, September 2010

5.4.2 Remittance trends

The population of Canada has grown by more than 129,300 people from July 2010 to October 2010. More than 65% of those people were new immigrants to the country. Within those 3 months, 84,200 new immigrants arrived in Canada.

For immigrants, online remittances are the most cost-competitive cross-border transfer method, given that there are no infrastructure costs to be recovered. As researchers have forecast a high growth in this market, numerous mobile money transfer initiatives are currently being deployed worldwide and Canada is no exception. The ability to send cross-border remittances via SMS text message makes the service extremely convenient, as there is no need to visit remittance locations or offices.

With this in mind, Western Union made its money transfer service available via the Zoompass mobile wallet app, developed by the Canadian m-commerce company EnStream. Zoompass users in Canada can send funds directly from their mobile wallets. Moreover, recipients can pick up their funds in cash at over 380,000 Western Union agent locations in 200 countries and territories. In addition, Zoompass members can send mobile-to-mobile transactions to subscribers of mobile phone companies with whom Western Union has launched the Mobile Money Transfer service, such as Globe Telecom and Smart Communications in the Philippines.

hyperWALLET, another Canadian provider of global payment services, announced the launch of a Canada to Philippines mobile remittance service dubbed hyperREMIT. The offering is set to allow Canadian customers to send funds to recipients in the Philippines. The enhanced service enables remittance transfers via bank deposits, cash pickups and door-to-door delivery, as well as via smart money transfers and prepaid airtime top-ups. Canadian customers can send funds over the phone or SMS, and money is expected to be available to Philippine recipients within one business day.

There are a number of other developments in the Canadian market:

- **Interac eTransfer:** In December 2010, Canadian national payment association Interac added an email money transfer service to its existing portfolio of online banking services. Interac's new service has been dubbed Interac e-Transfer which is a simple way to send and receive money directly from one bank account to another. All the customers need is access to online or mobile banking through a participating financial institution, and they can send money to anyone with an email address or mobile phone number and a bank account in Canada, without sharing any personal or financial information.

In the future, more consumers will adopt this type of technology, since many international consumers do not have internet access and have to rely on their phones for the bare necessities, which also include fund transfers.

- **UseMyServices:** UseMyServices is already well-established within the payment processing industry. The company's core product, dubbed UseMyFunds, is a proprietary technology that lets customers pay for online purchases directly from the bank accounts in 11 countries.

UseMyServices has developed an online technology which enables customers to purchase items and services online and pay for them using their existing financial services provider. The system can be used with banks which allow for account to account transfers, online bill pay or email money transfers. The company works with resellers who service vertical markets such as retail, airlines, subscriptions, travel, gaming and dating.

- **Mint.com:** US online personal finance software service provider Mint.com, a division of Intuit, has made available its services for Canadian users. As a result, Mint.com is set to enable Canadian users to connect to Canadian banking financial institutions, as well as to US banks and credit unions. Moreover, the Mint.com mobile apps for the iPhone and for Android-powered mobile phones are expected to be available on the iTunes Canada app store and on the Android Market. Since being acquired by Intuit, Mint.com counts over 4.5 million users and 16.000 financial institutions.

6 Asia

6.1 The current affairs in the online payments industry

In Asia, e-commerce represents the next area for retail growth. In Japan, for example, e-commerce revenues have jumped by nearly 17% per year since 2005⁶⁰. Nowadays almost two thirds of Japan's 90 million internet users are buying products and services at Rakuten, the country's largest online store. In some other countries, like Hong Kong and Taiwan, online shopping is also expected to grow but at a slower pace.

However, the most important area for growth is China. China's online payment transaction volume totaled USD 109.5 billion in the first nine months of 2010⁶¹.

Alipay dominates the Chinese market with a 75% market share for its online payment platform. Alipay, which is 40% owned by Yahoo, delivers an e-commerce payment technology and risk management system for banks and financial institutions.

China has also become one of the fastest-growing markets for PayPal's clients, with total transactions from China through the online payment system rising 88% in the first half of 2010. Instead of competing domestically in the US market, eBay now focuses its efforts towards expanding its exports and cross-border trades. eBay and PayPal are attempting to set its footprint on China by developing an international e-commerce platform.

eBay is counting on PayPal and partnerships with local companies to boost the revenue expansion in China, after failing to gain a local foothold to compete against the Chinese e-commerce company Alibaba Group.

For example, PayPal and the government of Chongqing, a city in Southwestern China, have entered an agreement, under the terms of which both parties are expected to enable users to pay for foreign online shopping transactions. The parties will develop five international e-commerce centers over the next few months for verification, investment promotion, national telesales, as well as merchant training and regional business development.

PayPal also closed new deals with China UnionPay and DBS Bank, as part of an action plan to double its presence and boost its growth in the region. As a result of the partnership closed with China's bankcard association China UnionPay (CUP), the latter's card members, over 2.1 billion worldwide, can use PayPal to pay for online purchases.

⁶⁰ The Economist Intelligence Unit and PricewaterhouseCoopers China

⁶¹ Analysys International, 2010

Outside China, PayPal partnered Singapore-based financial services provider DBS to enable the latter's customers to make purchases online without using their credit card. The eBay division also teamed up with the Infocomm Development Authority (IDA) national government agency in Singapore to provide the latter with its mobile payment platform. As a nation with 138% mobile penetration and where 8 out of every 10 phones being bought are smartphones, Singapore possesses great potential for widespread adoption of mobile commerce as an increasing number of retailers want to use the mobile channel to extend their reach and consumers want easy-to-use, secure payment methods on their mobile phones.

6.2 Chinese cards market

Credit cards have become increasingly popular in China over the past few years. Statistics from China's central bank have shown that China had around 207 million credit cards issued in June 2010, an increase of 10% compared to the end of 2009 and more than quadruple the level at the end of 2006.

China is expected to surpass the US as the largest market for credit cards by 2020, with about 900 million cards in circulation. By 2025, the figure is set to rise to 1.1 billion whereas the spending rate on those cards will total USD 2.5 trillion. Moreover, the pre-tax profit per China credit card is expected to reach USD 30 in 2025, an amount which is six times higher than the predicted USD 5 per card this year. China's fast urbanization process is regarded as the main cause generating this growth, with domestic spending on (credit) cards and the number of cards expected to increase by 11% and 14% a year from 2010 to 2025.

However, despite the impressive growth, China's payment cards market is still facing major challenges. One of them is the fact that China's economy might reverse its impressive growth and slow down significantly as the government's economic stimulus package comes to an end. Moreover, card penetration in urban areas, especially large cities, are quickly approaching saturation, making future rapid growth much more difficult in less ready markets. In addition, credit card business remains at loss for the majority of the banks including four of the top five credit card issuers.

China UnionPay is the national bankcard association in China, responsible for operating the unified inter-bank clearing and settlement system and developing the international acceptance network for the China UnionPay card.

In September 2010, China UnionPay and MasterCard Worldwide signed a Memorandum of Understanding (MOU) which entails the establishment of a cooperation mechanism for both parties. The two companies plan to form working groups in order to discuss business plans for online payments and other payment-related opportunities. The MOU may lead to future agreements that will improve merchant acceptance for MasterCard customers travelling to

China and for UnionPay card holders who travel abroad, according to MasterCard spokesman Chris Monteiro⁶².

Visa, on the other side, has entered into a conflict with UnionPay. The conflict started when Visa first warned UnionPay to stop processing international transactions for co-branded cards through UnionPay's own payment system rather than Visa's.

In response, UnionPay refused and issued a statement according to which both companies have a responsibility and obligation to provide overseas transaction services to co-branded card holders. Furthermore, UnionPay claimed that neither side has the right to unilaterally restrict card holders' options for overseas payment channels. According to UnionPay, foreign banks in China had to 'co-brand' with Chinese operators on credit cards and execute payments through UnionPay.

Visa took a stand, stating that overseas transactions must be processed through its network. Visa took the decision to no longer allow its global member banks to use UnionPay's clearance system for transactions on Visa-branded Chinese dual-currency credit cards for purchases or cash withdrawals outside the Chinese territory. As a result, Visa was prohibited to start new operations in China for almost a year.

Reportedly, a common direction set to bring the misunderstandings to an end has not yet been found, with UnionPay refusing to consider new business deals with Visa since the group asked it to observe the terms of their agreement. Nonetheless, while UnionPay has spearheaded an aggressive expansion campaign in multiple regions of the world (so far, the company has established partnerships with around 400 financial institutions worldwide, while its card international acceptance network has been expanded to 92 countries), foreign bank card companies are not allowed to provide local-currency services in China.

6.3 Alternative payment methods in China

Third-party online payments play a very important role in the Chinese e-commerce landscape, acting as a neutral agent to collect money for sellers from buyers and transfer the money to sellers' accounts when buyers confirm the products.

In May 2010, the People's Bank of China started working with Chinese banks to set up a banking online payment platform that will directly compete with Alipay, Alibaba's online payments division. The 'Super Online Bank' system supports real-time interbank transfers and interbank balance inquiries and will open new services such as third-party payment in the future.

⁶² Cited by Bloomberg

Before the launch of the system, customers had to log on to different banks' websites to manage their accounts, and inter-bank transfers usually took one or two days. The platform will help clear settlements among banks and is set to allow China's online banking users to carry out interbank transactions online, irrespective of the bank that hosts their individual accounts.

In addition, in June 2010, China's central bank issued regulation for third-party payment providers active in the country, such as Alipay and PayPal, in a move to establish a legal basis for China's online business.

Under the new rules, non-bank payment service providers must apply for a license from the central bank in order to operate in the country. Only companies with a registered capital of at least USD 4.41 million are eligible for the license, and service providers with national coverage must have a registered capital of at least CNY 100 million (USD 14.69 million). Companies applying for licenses must also have reported profits for at least two consecutive years and not have violated any business regulations in the prior three years. In addition, payment providers will also have to submit financial reports and client information to the central bank. Commissions charged for third-party payment services will also be subject to the bank's approval. The bank will issue separate rules for foreign-funded companies.

The new rules took effect on 1 September 2010. In Q1 2010, the top nine online payment services providers in China accounted for 98.1% of the market⁶³. As these top players are already eligible for licenses, the new rules will not have a major impact on the industry⁶⁴.

There are also a number of other companies are striving to expand their business on the domestic market:

- **Tenpay:** Chinese internet company Tencent's Tenpay is compatible with the e-banking service of major domestic banks. Users can use Tenpay to send payment, receive payment and withdraw money to bank account, to charge mobile, deposit money to game account and buy air ticket. Tenpay is a service built on the existing financial infrastructure of bank accounts and credit cards, making use of proprietary fraud prevention systems.
- **99Bill:** 99Bill is a third-party payment service provider mainly used for C2C, B2C, B2B, donation, mobile phone recharge transaction payment.
- **Yeepay:** Yeepay provides payment services across a number of platforms including the internet, mobile phones and traditional telephones. Yeepay sets up systems that connect merchants' websites with banks' online services, allowing consumers to make online payments. The company has closed deals with over 3,000 customers in China.

⁶³ Interfax China

⁶⁴ Interfax China

- **PayEase:** PayEase supports all of the Chinese debit cards and also adds support for Visa, MasterCard and JCB cards.
- **CtoPay:** CtoPay is a payment gateway which can accept Chinese debit and credit cards. This is an international company with offices in ShenZhen and Hong Kong.

6.4 CASESTUDY: ALIPAY

North America and Europe have eBay, but the Chinese have Alibaba. And just like eBay, Alibaba has its own subsidiary online payment method: Alipay.

Alipay, a subsidiary of the Alibaba Group, is an online payment services provider focusing primarily on buyers and sellers who are involved in e-commerce transactions. Its parent company Alibaba is active on three online marketplaces:

- **Alibaba International:** A website in English that connects importers with small to medium-sized sellers in China, with a look and feel similar to eBay.
- **Alibaba China:** A domestic website for business trade where clients pay a subscription fee to post products and offers.
- **Tobao:** Alibaba's consumer-to-consumer trading platform has reported 370 million registered users, offered 800 million items of merchandise and recorded a 60 million peak daily visitors in 2010.

Alibaba's payment platform Alipay provides customers online payment and settlement services. It delivers e-commerce payment technology and risk management system for banks and financial institutions. Ever since its foundation in 2004, Alipay has made many alliances in the electronic payment domain with domestic commercial banks including the Industrial and Commercial Bank of China, Agricultural Bank of China, China Construction Bank, China Merchants Bank and Pudong Development Bank, as well as with organizations such as China Post and Visa.

Alipay has several features, among others:

- The company charges no service fees to buyers and sellers on Taobao's online marketplace, Alibaba Group's online auctions website for customers.
- Multi-channel payment options are available to Alipay users, such as online bank transfer, cash and direct debit services.
- Alipay's platform features an escrow system. Alipay is engaged in partnerships with domestic Chinese banks to make escrow services available, which reduces the settlement risks that Alipay's customers face while making e-commerce transactions. Alipay

guarantees all transactions made via the Alipay escrow system and reimburses any buyer or seller who has utilized the system and has become a victim of fraud.

- Buyer's payment is held in Alipay escrow account until receipt of product is confirmed.
- The number of external merchants using Alipay as their favorite online payment platform has reached 330,000, including leading local brands Lenovo, CCTV, Aigo and NewOriental.

In November 2010, Alipay reached the milestone of 500 million users. Alipay's transactions are now worth more than USD 208 million, while 5.5 million individual purchases are made via the website daily.

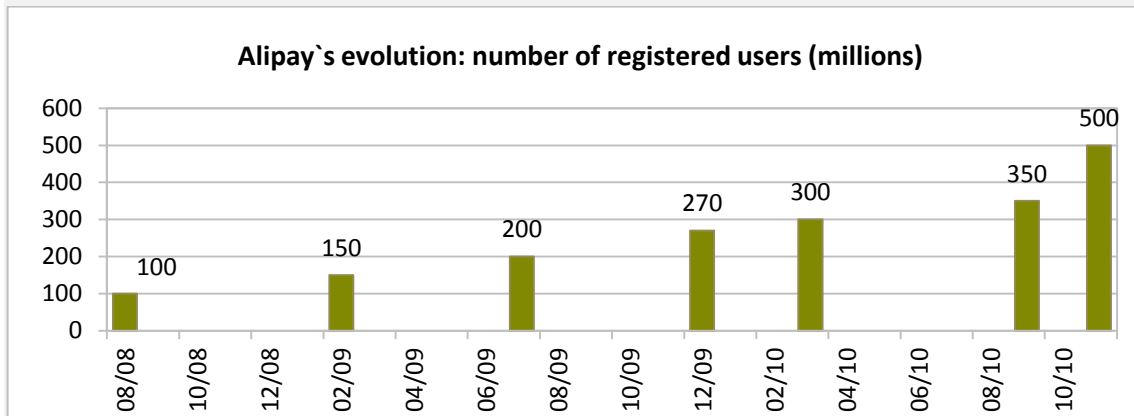


Figure 8: 'Alipay's evolution'. Source: several articles from The Paypers

Alipay leads the market with a 50.0% market share, followed by Tenpay with a 20.3% market share. 99Bill and ChinaPnR have a 6.2% and 6.1% market share, respectively. Due to their large user base and continuous new product development, Alipay and Tenpay will remain the leaders in the online payments industry in the next few years with a stable market share.

7 Latin America

7.1 Main developments

As compared to other regions in the world, the e-commerce industry in Latin America is still pre-mature, but with a market of 500 million people, representing almost 8.6% of the global population and with the number of internet users growing ever larger, Latin America has strong potential. And consumers are starting to adopt the online channel. In the last years, Latin America has witnessed some of the world's fastest growth in online business. Research indicates that, while e-commerce totaled around USD 16 billion in 2008, this number has jumped to USD 30 billion in 2010⁶⁵.

The increase in Latin America is attributable to a series of factors that include advances in technology, changes in consumer activities and the rapid development of the internet and broadband access.

In Argentina, for example, as a result of the growing number of internet users and the increasing penetration of e-commerce services within large and medium enterprises, e-commerce climbed 25-30% in 2010, as compared to ARS 5.24 billion (almost USD 1.36 billion) registered in 2009⁶⁶. B2C sales account for nearly 5% of total sales in the country, while the C2C segment generates the rest. Almost 26% of internet users buy products and services via e-commerce channels. By the end of 2010, their number is expected to reach 26 million.

The e-commerce sector in Mexico is increasing by 70% every year. Adolescents and young adults are the main contributors to such a boost in online shopping since they represent two thirds of the total number of internet users in Mexico. Nevertheless, Mexico still needs to catch up with Brazil, another major e-commerce player, whose market is four times larger than Mexico's in this respect.

There are a number of alternative payment options for Latin Americans. In Mexico, transactions are cash or debit based, offline bank transfers are also popular and there is the prepaid Todito Card. In Brazil, almost 30% of online payments are made via Boleto Bancario system, besides the 'real time bank transfer' system of DebitoOnline⁶⁷. Pago Facil is a cash payment method for Argentina. There are also a number of prepaid cards that are accepted elsewhere, such as in Uruguay.

⁶⁵ Visa -- B2C Electronic Commerce in Latin America and the Caribbean: Beating All Odds, 2008

⁶⁶ According to BNamericas, citing the director of local consultancy firm Prince & Cooke

Cash-based systems are pretty popular, as well as services that allow customers to make use of different payment options like e-wallets. E-prepag, for instance, is an important credit distributor in the Latin American game market, offering online and offline sales channels and enabling customers to pay with all main local methods, including cash.

7.2 Company developments

7.2.1 paysafecard

Many Latin American countries face challenges and risks in collecting payments and managing collected funds. paysafecard targets users who either do not own or are reluctant to using a credit or debit card for online purchases and other micro payments on the internet. paysafecard is available in EUR 10, EUR 25, EUR 50 and EUR 100 e-vouchers at over 230,000 outlets across Europe and South America. Users authorize payments by entering a PIN code, similar to the system used with prepaid phone cards. paysafecard is being distributed via 3,500 outlets in Argentina, which will be the company's base for further expansion into Mexico. paysafecard also introduced its voucher-based payment service in Mexico, as part of the company's plans to expand its presence across the Latin American continent.

Already adopted as a payment method in Argentina, where it was introduced in June 2009, paysafecard vouchers function like a charge card for mobile phones. When making a payment, customers' financial privacy remains fully intact. The voucher features a 16 digit PIN code needed to complete a transaction. The amount paid is then debited from the paysafecard balance, which can be checked online. The vouchers can be bought at 280,000 outlets in Europe and Latin America. More than 3,500 web-shops around the world accept paysafecard as a payment method.

7.2.2 Ukash

Ukash, the UK voucher-based prepaid online payment services provider, joined forces with international online payment gateway and fraud management services provider First Atlantic Commerce (FAC) and transactional payments company Mercadotecnia Ideas y Tecnología to introduce Ukash voucher payment solutions, including multi-currency voucher issuing and full and partial voucher redemptions on the Mexican market. Ukash also teamed up with Rocalix S.A. to make Ukash vouchers available at 300 sites in Uruguay. Rocalix made this possible through its partner Redpagos, a domestic provider of financial services including currency exchange, mobile telephone airtime top-up and bill payments. As a result of the agreement, the Uruguay-based consumers who do not have access to credit and debit cards or those that are fearful of online fraud can purchase Ukash vouchers, available in denominations of USD 20, USD 50 and USD 100, and use them to shop, pay and play online.

7.2.3 MoneyGram

In 2008, more than USD 7 billion in remittances was sent into the country from the 4 million Brazilians who live in other countries. To service this market, MoneyGram International has added almost 1,200 locations in Mexico, Ecuador, Colombia and the Dominican Republic, increasing the number of MoneyGram agent locations to 25,000 in the Latin America region, including Mexico and the Caribbean.

In Brazil, MoneyGram International signed a multi-year contract with financial services provider ItauUnibanco to add 1,000 MoneyGram agent locations. MoneyGram services will be added in phases to the 1,000 locations of ItauUnibanco, as a result of the bank's plans to combine Bancoltau and Unibanco. In order to collect funds in Brazil, customers can visit any ItauUnibanco agent location, complete a form and show required identification.

7.2.4 MercadoPago

MercadoLibre is an auction platform created in 2004 and modeled after eBay, which has a 19.5% stake in the company. MercadoLibre hosts transactions between users who price and arrange sales themselves (consumer to consumer). Any internet user can browse through the items and services that are listed on the website and register with MercadoLibre to list, bid for and purchase products and services. The range of products offered by the company includes the traditional e-commerce items (books, music, videos, electronics, computers, hardware, cameras, mobile phones) as well as industrial goods and services.

MercadoLibre operates in 12 Latin American countries, including Argentina, Brazil, Mexico, Uruguay, Colombia, Venezuela, Chile, Ecuador, Peru, Costa Rica, the Dominican Republic and Panama. In 2009, more than 3 million users sold products and 9 million people made 29.5 million product purchases via the company's platform, up 39% year-over-year.

MercadoLibre offers its customers various methods of paying. Apart from credit cards and money orders, cash, bank transfers, installments, there is also an online payment service called MercadoPago, the company's equivalent to eBay's PayPal payment system.

Just like PayPal, the MercadoPago online payments service enables any individual or business registered with MercadoLibre to send and receive payments online via e-mail accounts. The direct payments service facilitates the completion of transactions online and operates as an escrow service, which reduces the settlement risks that customers face while making transactions. The service has been made more user-friendly by cancelling the requirement according to which consumers must pay for the cost of escrow to make their payments more secure.

8 The Middle East and Africa

The African society is cash-based: people are accustomed to using cash for most of their transactions. Limited availability of electronic payments and low level of credit card access are major barriers for the development of e-commerce. The lack of government policy on credit cards, the lack of credit card initiatives from the private sector, conservatism among banks and high risk for consumers as well as low use of banking facilities are all major challenges.

E-commerce in the region has been slow to take off due to two key factors, namely the lack of awareness and interest, as well as the low number of e-commerce portals that allow customers to buy online directly from the brands.

Companies that have e-payment platforms such as I&M Bank, JamboPay, PesaPal and I-pay say the uptake of cards for electronic commerce has been very slow. This has forced the players to integrate their systems to mobile phone operators' platforms to attract more customers. Thus, the mobile has come to be regarded as a channel which facilitates access to formal financial services. Nigeria has licensed no less than sixteen mobile money providers, in a country with 70 million bankable customers.

In the Arab world, credit and/or debit cards is the most accepted method of payment with 63% of the analyzed portals using it. Bank/wire transfer or checks and cash on delivery options are also frequently used.

The United Arab Emirates is considered the third wealthiest country in the world in terms of gross domestic product per capita. Nevertheless, in this country e-commerce is still in early stages, mainly because the traditional retail infrastructure is very developed and online shopping is considered a leisure activity, not a necessity.

Annexes



Annex 1: Background information and references

The information in this report is likely to change because of many developments. Therefore we provide an overview of the sources we used in this chapter. This will provide background information that will help merchants organize their web shop and internet payment system. In this chapter you will find information about studies into internet usage, e-commerce and other related issues.

Studies on internet usage

Statistical information on internet usage can be found on the following sites:

<http://ec.europa.eu/eurostat>

www.Internetworldstats.com

Studies on e-commerce

Reliable, publicly available information on e-commerce behavior is hardly available. Some information can be extracted from:

<http://ec.europa.eu/eurostat>

Dutch research agencies regularly publish summaries of the most important e-commerce research results. For more information visit the following websites:

www.blauw.nl Blauw Research

www.multiscope.nl Multiscope

www.tns-nipo.com TNS-NIPO

E-Commerce Center of the University of Karlsruhe:

www.ecc-handel.de

Research on e-commerce in Poland and other countries of Central and Eastern Europe can be found via:

www.gemius.pl Gemius

Other research market organizations include:

www.innopay.com Innopay

www.forrester.com	Forrester Research
www.gartner.com	Gartner
www.imrworld.org	IMR World
www.emarketer.com	E-Marketer
www.javelinstrategy.com	Javelin Strategy and Research
www.nilsonreport.com	The Nilson Report

Policy in the Netherlands

As part of government policy in the Netherlands, there are various activities aimed at promoting electronic commerce. The policy documents concerning the digital delta can be found on the following site:

www.minez.nl

Concrete information can be found with the ‘the Netherlands goes digital’ initiatives (‘Nederland gaat digitaal’). Information on this subject can be found at:

www.syntens.nl

E-commerce for the entrepreneur

A general website containing information about the business use of the internet for sector and company is:

www.zibb.nl

General information on the various aspects of doing business via the internet can be found on the website of the Dutch Platform for the Information Society:

www.ecp-eqn.nl

Information on quality marks can be found on the website of the Dutch quality mark institute:

www.keurmerk.nl

A Dutch initiative is the quality mark of Thuiswinkel Waarborg. Thuiswinkel is the Dutch branch organization for web merchants. Visit:

www.thuiswinkel.org Thuiswinkel.org

Other branch organizations are:

www.emota.org	EMOTA (Europe)
www.imrg.co.uk	IMRG (The UK)
www.versandhandel.org	Verbund des Deutschen Versandhandels (Germany)
www.vad.fr	Federation de Vente a Distance FEVAD (France)

Service of the German TÜV to provide for safer e-commerce:

www.safer-shopping.de/

Service provider that certifies web shops:

www.trustedshops.de/de/home/

For information on an international quality mark initiative, visit:

www.bbbonline.org/Business/

Payment-related service provision

Specialized service providers in the area of debtor management:

www.intrum.com

www.maxcredible.com

www.infoscore.de/de/index.html

www.schufa.de

www.inkassofort.de

Information about payment products

General information about payment products is available on the website of the Bank for International Settlements:

www.bis.org/cpss/cpsspubl.htm

Specific information about the organization of payment systems in the various countries of the European Union (the so-called Blue Book) can be found on the website of the European Central Bank:

www.ecb.int/paym/market/blue/html/index.en.html

The website of the ePayment System Observatory contains a database with information about payment products and background papers. The website is:

www.e-pso.info

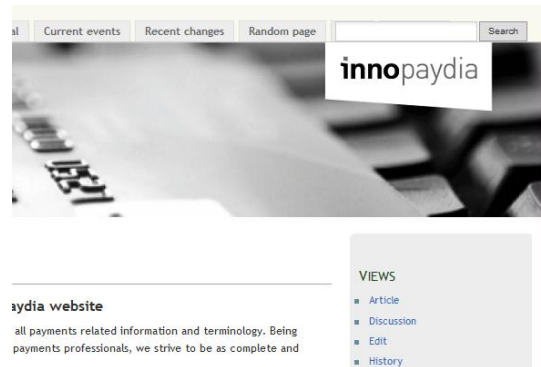
Annex 2: Glossary

Innopaydia

With ‘Innopaydia’, Innopay has created its own ‘Wikipedia’, specifically for background information on payments, channels and transactional services. All terms in the glossary of this document can also be found on Innopaydia, including a source or reference (where applicable).

Experts are invited to add and/or maintain information in Innopaydia.

www.innopaydia.org



3-D Secure

Common technological standard (3 Domain Secure) of Visa and MasterCard, set up to make online credit card payments more secure. For commercial reasons, Visa and MasterCard use different brand names: Verified by Visa and MasterCard SecureCode.

Authorization

Online payments often involve direct authorization 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.

BSP (Bill Service Provider)

Provider of billing / invoicing services. See also: e-invoice.

Capture

With credit card payments an entrepreneur can decide not to submit a payment order to the bank or credit card company immediately, and wait until the order has been carried out completely. When that is the case, the authorization and ‘capture’ are separated. Capture refers to the separate submission to a bank or credit card company of a certain payment order (that has been authorized earlier).

Chargeback

Reversal of a credit card payment. Chargeback is only possible after settlement to the merchant has taken place.

Chip & Pin

The name under which EMV (see EMV) was introduced in the United Kingdom.

CNP (Card Not Present)

Transaction type for credit cards where the card cannot be shown physically to the retailer, for instance in the case of e-commerce transactions and MOTO transactions. Is the opposite of Card Present (CP) transactions.

CoD

Card/Cash on Delivery. Payment method with which payment (cash or by card) takes place when goods are delivered. In Belgium, France and the Netherlands known as 'rembours' or 'remboursement'.

CP (Card Present)

Transaction type for credit cards where the card is physically present during the transaction and can be read, via a magnetic stripe or chip. Distinction between unattended (for instance parking meters and vending machines) and attended (counter transactions where the retailer is physically present). Is used as opposite of Card non Present (CNP).

CVV and CVC (Card Verification Value/Code)

Three or four digit code printed on the credit card and often requested on the Internet for extra security.

E-invoice, E-invoicing

The electronic presentation of statements, bills, invoices and related information sent by a company to its customers, and corresponding payment for goods or services.

E-wallet

Prepaid wallet that allows consumers to maintain a credit that can be used for (micro) payments on the Internet. Most wallets can also contain information regarding the payment account and credit card, making it possible to 'upload' credit from these accounts. The wallet can also be used to pay for online purchases using the credit card information (stored on the wallet).

EBPP

EBPP stands for Electronic Bill Presentment & Payment. See E-invoice.

EIPP

EIPP stands for Electronic Invoice Presentment & Payment.

ELV (Elektronisches LastschriftVerfahren)

German Direct Debit system for online payment. Payment method which is very popular in Germany, although the payment is not guaranteed. ELV is a debit card, which in online transactions behaves like a credit card.

EMV

Is a standard for credit cards that contain a chip. By having this chip read by payment terminals more secure transactions are possible. The EMV chip will replace the signature on the sales slip of a credit card transaction.

Escrow payment

Payment that involves the services of an independent third party (Trusted Third Party, or TTP). The third party removes the distrust that may exist between parties by safeguarding the money (or delivery) until the other party has fulfilled his part of the deal.

HTML

HyperText Markup Language. A programming language (or rather lay-out language) that is used predominantly in designing Internet pages.

HTTP(S)

HyperText Transfer Protocol (Secure). Protocol developed by Enterprise Integration Technologies enabling secure communication over the Internet.

IBAN

International Bank Account Number.

Internet cash register

Virtual equivalent of a cash register that allows consumers to decide which payment method to use. The Internet cash register can be developed by the entrepreneur, including the connections to banks or credit card companies, or it can be leased from third parties. The cash register and payment provisions are then provided by Payment Service Providers.

Liability shift

A shift of liability from the acquirer towards the issuer in the case of credit card chargebacks. The authentication protocol of Verified by Visa (VbV) and MasterCard Secure Code (MCSC) offers merchants 100% protection on all transactions processed under the VbV or MCSC program. Merchants who adopt this program are no longer liable for card-non-present (CNP) chargebacks resulting from transaction denials.

MCSC (MasterCard Secure Code)

Brand name used by MasterCard for its authentication method, based on 3D Secure technology.

Mobile payment terminal

Device that enables PIN and/or Chip card payments, not linked to a physical location. For example, for payments on a market or delivery at home.

Mobile commerce

Wireless electronic way of doing business, for instance via mobile telephone or wireless networks.

MOTO (Mail Order / Telephone Order)

Qualification of the channel by which the transaction is done. Transaction where the card holder provides his card details to the retailer via mail/fax or telephone. A third channel is the Internet channel.

MSC

Merchant Service Charge, the costs of payment processing for retailers. Often a percentage in the case of credit cards and a fixed fee for debit payments.

Multi-channel

Term that is often used to indicate that consumers can contact a company over the telephone, via the Internet and in a physical store. It is important to ensure that the information concerning those contacts is stored, to ensure a seamless service across all the various channels.

Payment method, payment product and payment tool

Payment method:

A generic way in which a payment is carried out, for instance by PIN card, credit card, Internet banking, COD, premium SMS.

When a payment method is not generic but specific, it is called a payment product.

Payment product

A specific version of a payment method used by a (commercial) provider, for instance Visa and MasterCard, the Internet banking product of a particular bank, TPG Post COD services, the premium SMS product of a provider, Mobile2Pay, Way2Pay, Rabo Direct Betalen, MiniTix.

In some cases a (specific) payment tool is used.

Payment tool

A tool that is used to carry out a payment with a payment product, for instance a card, random reader, money transfer form, 'acceptgiro', mobile telephone.

Payment Service Provider (PSP)

A company that offers service in the area of payments. These services consist of, for example, various payment modalities, Electronic Bill Presentment and Escrow services. A Payment Service Provider acts as intermediary between buyer and seller.

Phishing

Phishing is tricking people in giving confidential information to unauthorized people. This is especially useful when login credentials do not change over time. Gathered information can be used over and over again, in that case. Phishing can be done over the phone, by email, or by using a specially crafted program (Trojan horse), which records the requested information.

Plug-in

A piece of software that adds functionality to a program that can use plug-ins. An example of a plug-in is Realplayer, which allows movies and music to be played in the browser.

Premium SMS

An SMS text message sent at a higher rate, in return for a specific service. The charged rate is split between merchant and the provider of the premium SMS service.

Pre-paid

A payment that is made in advance for a service that has not yet been used. The 'credit' can be stored on a(n) (electronic) carrier.

PSD

Payment Services Directive. The European Parliament approved a new European legal framework for payments in 2007. The PSD has to be implemented in the national legislations by November 2009.

Reconciliation

This is the matching of orders done by (Internet)shoppers with incoming payments. Only after a successful reconciliation the merchant will start the delivery process. The extent to which Payment Service Providers carry out reconciliation and the way in which they do so (sending an e-mail, providing files) may vary.

Refund

Is a status in the credit card process. Is the refund of a transaction amount, done after (successful) communication between a web merchant and a consumer.

Reversal

Reversing a payment order. The term is often used to describe the situation in which consumers reverse an automatic collection.

Reverse billed SMS

A premium SMS service that involves payment for the messages that are received. Premium services with MO traffic are not yet supported by all operators.

Roaming

The exchange of traffic between the networks of different operators. Often there are roaming costs.

SEPA

‘Single Euro Payments Area’. 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.

SET

Secure Electronic Transaction. The protocol guarantees the safe transfer of data surrounding Internet payments. The identity of both parties exchanging information, for instance with the purchase of goods, is secured and safeguarded by a Trusted Third Party (TTP). SET is replaced by Verified by Visa (VbV) and MasterCard Secure Code (MCSC).

SSL

Secure Socket Layer. A method designed to ensure the safe exchange of Internet data between a website and your browser. The data are encrypted to ensure that nobody else can see or track them, for instance credit card data. As soon as you open a website with SSL, you are alerted by your browser, and a small key or padlock (depending on the type of browser you

use) is visible as long as the security is operational. By clicking on the key or padlock you can check the authenticity of the provider.

USP

Unique Selling Point. Description of what makes a product / service different from others.

VbV (Verified by Visa)

Verified by Visa is the brand name that Visa uses for secure transactions based on 3D technology. In short, card holders are submitted an additional authentication check by their issuer to prove who they are. This authentication protocol offers merchants 100% protection on all transactions processed under the Verified by Visa (VbV) or Master Card Secure Code (MCSC) program. Merchants who adopt this program are no longer liable for card-non-present (CNP) chargebacks resulting from transaction denials.

WAP

Wireless Application Protocol, a technology that allows mobile Internet surfing. This is only possible with special WAP telephones, or WAP PDAs. Not every detail of an ordinary website can be shown on a small screen. That is why special WAP sites have been developed that can be recognized by the first three letters: MMM instead of WWW. Due to their low speed, current GSM networks are still an obstacle in this development.

Web shop

Internet shop, shop on the world wide web.

XML

eXtensible Markup Language. Using XML documents can be described that contain structured information. Structured information consists of content and indications concerning the meaning of that content.

Annex 3: Changes vs. 'Online payments 2010'

This edition has undergone important changes in the following areas:

- In the area of online payments the global trends, developments and ongoing discussions have been separated from the regional developments. To this end the document has been divided into two parts: part 1 describes the general, global developments in online payments, while part 2 provides an overview of the main developments per region. Part 2 is still subject to expansion, as not all regions are described to the same level of detail.
- The theoretical background on consumer behavior in online payments, the main online payment methods as well as the information on the payment process are no longer part of this report. This information can be found in 'Online payments 2010', which can be downloaded at www.innopay.com.
- The list of online payment service providers has been transferred to The Paypers, which now publishes the PSP Buyer's Guide every year. The PSP Buyer's Guide 2010 includes more than 260 providers worldwide, with an overview of the services of each one. The PSP Buyer's Guide can be downloaded at www.thepayers.com.

To retain the focused nature of this report, the in depth analysis of developments in e-identity, mobile payments and e-invoicing have been removed from this report. Individual reports have been and will be published for all these topics that can be downloaded for free from www.innopay.com.

Annex 4: About Innopay

About Innopay

Innopay is an independent full service consultancy firm specialized in payments and related transaction services.

Our key practices include online payment, e-invoicing, e-identity, mobile payment, cards and related regulation.

Given our independent position, we work for all players in the industry. We devote research time and investments to help peer professionals ‘**structure & understand**’ these topics and actively facilitate industry knowledge transfer, which we consider crucial for the further development of global e-business. Our leading industry reports can be downloaded for free.

With our in-depth knowledge and experience gained on both the demand side and the supply side, we are ideally positioned to help our clients determine the direction of their growth. This often results in new products and/or markets that we successively help to ‘**develop & manage**’ and bring to market in a controlled and effective way. We do this for single clients but also for groups of clients. Consequently, we have extensive experience in developing multi-party transaction schemes and accompanying messaging standards in diverse industries such as financial services, insurance and document exchange. On the other side, we help corporate users to ‘**choose & use**’ the transaction services that fit their specific business needs from the wide array of often industry tailored transaction services on offer. We use a multi-disciplinary approach covering commercial, operational and technical aspects.

Innopay is a member of the European Payments Consulting Association (EPCA) and the Payment Systems Market Expert Group (PSMEG) of the European Commission and an associate member of the Euro Banking Association (EBA).

For more information visit www.innopay.com or contact Chiel Liezenberg at chiel@innopay.com or +31 20 6580651.

About the editors

Chiel Liezenberg and Douwe Lycklama are the founders of Innopay, an independent consulting firm specialized in payments and related transaction services.

Chiel and Douwe are thought leaders in online en mobile payments, e-invoicing and e-identity, shaping breakthrough business and market innovations, schemes and standards. They regularly publish articles and reports on these fields of study and both are a frequent speaker at conferences.

Chiel holds an MA in Mechanical Engineering and Industrial Organization, Douwe holds an MA in Electrical Engineering, both from Delft University of Technology.

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