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Payment Systems in the B2c eCommerce: Are They a Barrier for the Online Customer?

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Abstract

The B2c eCommerce is still far from realizing its full potential, despite its considerable growth in all the most important markets (USA, UK, France, Germany, Italy, etc.) in the last ten years. Several hurdles have to be overcome by both the customers and the merchants. One of the most cited is the lack of trust in the electronic payment. This is particularly so for the Italian market where customers have shown a strong reluctance in using the online shopping channel.

The study presented in this paper seeks to understand if the payment systems can be considered as a barrier for the B2c eCommerce diffusion. More in detail the objectives of the paper are two-fold:

- to give a detailed picture of the payment systems used to shop online and of the main related issues both from the merchant and the consumer side;
- to build an explanatory theory to justify the current and future diffusion of the various payment systems that takes into account the factors influencing their suitability for the B2c eCommerce.

The analysis is mainly based on case studies among the most important (top100) Italian eCommerce merchants which have been carried out as part of the B2c Observatory of the School of Management of Politecnico di Milano. The latter has studied the online sales in Italy since 2000 and has activated a research stream focused on the payment systems supporting the B2c eCommerce transactions.

The 90% of the value of the B2c eCommerce transactions in 2008 in Italy has been supported by electronic Payments (credit cards,65%, eWallets,16%, and bank transfer,9%), but the trust building in the ePayment is low: 52% of the Italian Internet Users is afraid of using the credit card online. Despite the low trust, the security of the credit cards supporting the B2c eCommerce transactions is very high: the online frauds in Italy represent about 0,2% of the value of the online transactions in 2008 and, moreover, most of the frauds take place offline. Fraud prevention systems are widely adopted among the top 100 eCommerce websites: 4 out of 5 adopt at least one of them.

The main driver affecting the diffusion of the different payment systems is their suitability to the online channel and not the trust of the users. We clustered the main payment systems according to all the main factors affecting their suitability to support the B2c eCommerce transactions. The most appropriate systems for the B2c eCommerce (we called them "eCommerce Best fitting" – credit cards and eWallets), are also the most diffused ones. They are followed by the bank transfer (defined as an "eCommerce Appropriate" system) and by all the other systems (loan, cash on delivery, postal order) that have been called "eCommerce only if necessary". Trust does not seem to be the critical factor driving the diffusion of the payment systems. The correlation of the diffusion with trust is negligible with respect to the one with suitability. Despite their high trust, cash on delivery and postal orders are not very diffused, while the credit cards, despite their low trust, are the most diffused payment system.

INTRODUCTION AND OBJECTIVES

The eCommerce channel, despite the bubble burst in the late 2000, is expected to be one of the most promising 21st century revolutions in B2c Commerce. From the very beginning the potential of the Internet to transform the way of shopping products and services has been widely recognized in that the Internet was supposed to reduce communication costs, to facilitate the interaction between customer and seller, to offer access to a global market and last, but not least, to allow lower entry market costs than other conventional commerce channels (Garret S., Skevington P., 1999).

The most recent figures show that there has actually been a considerable growth in the eCommerce values in the main markets (USA, UK, Germany, France, etc.) (Figure 1). However, the penetration on the overall retail sales is still low (less than 10% both in the US and in Europe), clearly indicating that the potential of the B2c eCommerce has not been fully exploited yet.

	eCommerce value 2007	eCommerce value 2008	Growth 2007-2008
USA	**225 - 240**	**260 - 280**	**~ 15%**
	$ billion	$ billion	%
Europe	**130 - 135**	**165 - 175**	**~ 25%**
UK	**55 - 65**	**70 - 80**	**~ 20-25%**
Germany	**~ 30**	**~ 37**	**~ 23%**
France	**~ 16**	**~ 21**	**~ 30%**
	€ billion	€ billion	%

Figure 1 – The main B2c eCommerce markets and their growth rate

In Italy the main figures stemming from the B2c Observatory of Politecnico di Milano - that has studied and monitored the online sales in Italy since 2000 - show that the overall value of B2c eCommerce in 2008 was € 5,9 billion, less than 1% of the overall sales to the end customers. The most important industry is Tourism that represents 56% of the value of the transactions, followed by Consumer electronics (9%), Insurance (7%) Apparel (4%), Books, CDs and DVDs (2%) and Groceries (1%). The remaining 20% consists of the c2c (consumer to consumer) sales and the plethora of all the other micro-sectors/industries. Overall, the Italian eCommerce is still a very small fraction of the overall B2c sales.

The figures show that the path to realize the full potential of the B2c eCommerce is still long and several hurdles have to be overcome (e.g. scarce ICT culture, lack of trust in the electronic relationship, overlooking of logistics, poor design of the web site, poor marketing management, etc.). One of the main obstacles has often been identified in the lack of trust in the electronic payment. This is particularly true for the Italian consumers who have shown a stronger reluctance in shopping online. In fact, both the ratio

between Web Shoppers and Internet Users and the average Web Shopper expenditure per year are the lowest among the main European markets (UK, Germany and France) (Figure 2). In Italy only 20-25% of the Internet Users has shopped online (i.e. 6-8 million people out of 32-34 Internet Users), while in France, Germany and UK the penetration is between 55 and 70%. The average annual purchasing value per Web Shopper in Italy is less than one third the corresponding value in the UK and 15 and 25% lower than in France and Germany respectively.
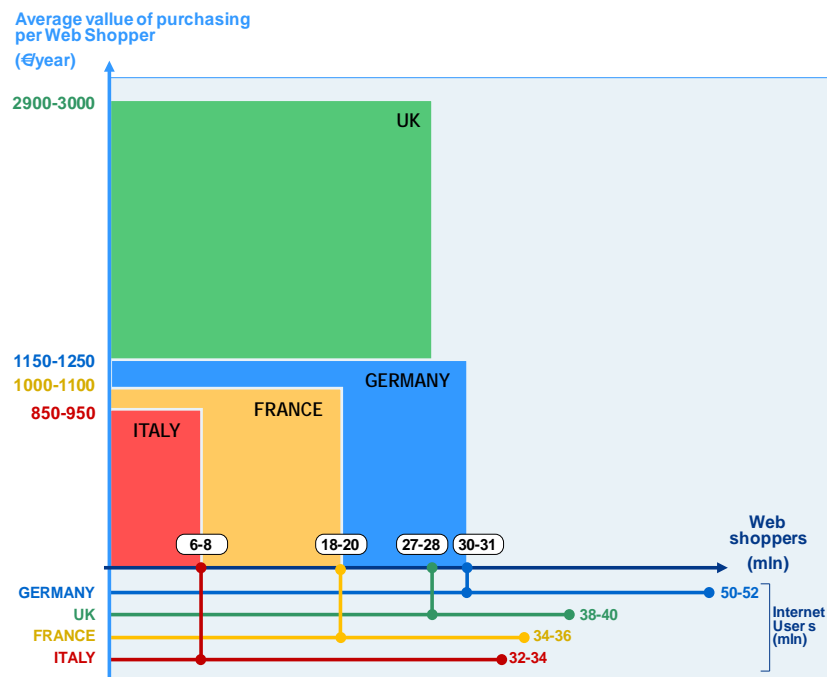

Figure 2 – Internet Users, Web shoppers, average annual purchasing value per Web shopper (2008)

This paper aims to understand if the payment systems can be considered as a barrier for the B2c eCommerce diffusion and has two specific objectives:

- give a detailed picture of the payment systems used to shop online and of the main related issues both from the merchant and the consumer side;
- build an explanatory theory to justify the current and future diffusion of the various payment systems that takes into account the factors influencing their suitability for the B2c eCommerce.

In addition to the Introduction and Objectives, the paper is structured into 5 sections. Section 2 includes a description of the main methodologies, techniques and sources adopted in carrying out the research. Section 3 provides a description of all the main payment systems used to support the B2c eCommerce transactions. Section 4 presents the main results stemming from the Observatory of Politecnico di Milano in terms of diffusion and security of the main payment systems. Section 5 offers an assessment, based on a multi-criteria approach, of all the main payment systems supporting the

online transactions. Finally, section 6 draws some conclusions and recaps the main evidences.

METHODOLOGY

In order to achieve the objectives presented in the above paragraph, the B2c Observatory of the School of Management of Politecnico di Milano has activated a specific research stream focused on the payment systems supporting B2c eCommerce transactions. The research is mainly based on a multiple-case study methodology that seems to be the most appropriate since it provides both qualitative and quantitative data on the phenomenon under analysis, i.e. the payment system supporting eCommerce in Italy (Eisenhardt, 1989). Two different types of case studies have been conducted:

- Multiple descriptive case studies. A case study research among the top 100 Italian B2c eCommerce merchants – representing more than 90% of the overall market - has been conducted through "de visu" interviews with their top management (CEOs or Marketing managers).

- Multiple explanatory case studies. An interview with three of the leading service providers (i.e. Cartasi -the issuer of Visa and Mastercard credit cards in Italy and Paypal and Poste which provide the largest part of the pre-paid credit cards in Italy) has been carried out in order to analyze the issue of online payments security more in depth and from the providers' point of view.

In addition to the case studies, the research work made use of two other kind of methodologies:

- Survey. A survey addressed to medium and small eCommerce providers - the long tail of the B2c eCommerce merchants - has been conducted in order to get a more complete picture of the diffusion and the adoption of the different payment systems in Italy. 200 compiled questionnaires have been received.

- Secondary sources. In order to provide a complete picture of the payment systems and of the main related issues also from the consumer side, some research in this field conducted by universities and research societies (e.g. Gfk-Eurisko, Forrester, etc.) has been considered.

Payment systems supporting eCommerce transactions

According to the literature analysis in the ePayment field and the case studies conducted in the B2c eCommerce Italian market, the following payment systems appear in use:

- Credit card, both standard and pre-paid. An online payment by credit card requires the customer fill the web form with the credit card number, its expiration date, the CVV2/CVC2/CVA2 (i.e. the 3-digit code on the back of the card), the data of the credit card owner (i.e. name and surname). In addition to the standard credit card, in the last years, the prepaid credit cards have been introduced in order to overcome the lack of trust of many customers. A pre-paid credit card can be top up in advance and as a consequence in case of fraud the maximum amount of money that can be stolen is what the owner has already moved on his card.

- Bank transfer. A bank transfer on the bank account of the merchant can be done by the customer both online and offline. For sake's simplicity we took into account the online bank transfer only which is both the quickest and the most diffused one in supporting eCommerce transactions. On average the products/services are delivered only when the merchant receives the money on its account, but some merchants can start fulfilling the order as soon as they receive just the receipt. The increasing diffusion of the online banking can of course boost the diffusion of this tool most of all for high value transactions.
- Electronic wallets (i.e. Paypal, Bankpassweb, etc.). An electronic wallet is a wallet that can be filled with the credit card (data) or refilled through bank transfers. Once the customer has registered the specific eWallet (compiling a web form including both the personal and the credit card data), he needs the user id and the password only to make an online transaction (the credit card data are not necessary anymore when making a purchasing online). Some eWallets can even generate a temporary credit card number (i.e. a credit card number that can be used just once) that can be used on any website even though the latter does not accept the eWallet.
- Cash on delivery. The consumer pays in cash when he receives at home the product bought on the Internet. The management of the transaction is made by the express courier and not by the merchant.
- Loan. The customer asks for a loan during the check out process. The bank or credit society replies in a few hours with the approval or denial of the customer's request. If the request has been approved, the customer prints, signs and sends the documents back. When the merchant receives the money from the bank, the order fulfillment gets started.
- Postal order. The customer has to go to a post office to make the postal order to the merchant. As soon as the merchant receives the money, the delivery process can start.

Diffusion and security of the payment systems: research findings

In this paragraph we report the main evidences about the diffusion of the payment systems and the main related issues in the Italian B2c eCommerce scenario.

The large part of the B2c eCommerce transactions in 2008 in Italy has been supported by electronic Payments (credit cards, eWallets and bank transfer) (Figure3). However, the split of the eCommerce value by payment system is quite different according to the specific industry.

The split of the eCommerce value by payment system (Figure 3) shows that Paypal increased from 10 in 2007 to 16% in 2008 while the credit card decreased from 70 to 65%. It's worth highlighting that Paypal requires a credit card to be used. Despite the low trust in the use of the credit cards, more than the 80% of the value of the B2c eCommerce in Italy is managed through credit cards. The bank transfer increased from 7 to 9% in 2009 thanks to the higher diffusion of the eBanking in Italy. Assuming that the

large part of the bank transfers is managed through the eBanking tools , almost 90% of the value of the Italian B2c transactions is managed online. The cash on delivery passes from 7 to 5%, while the importance of the other payment systems is almost negligible.
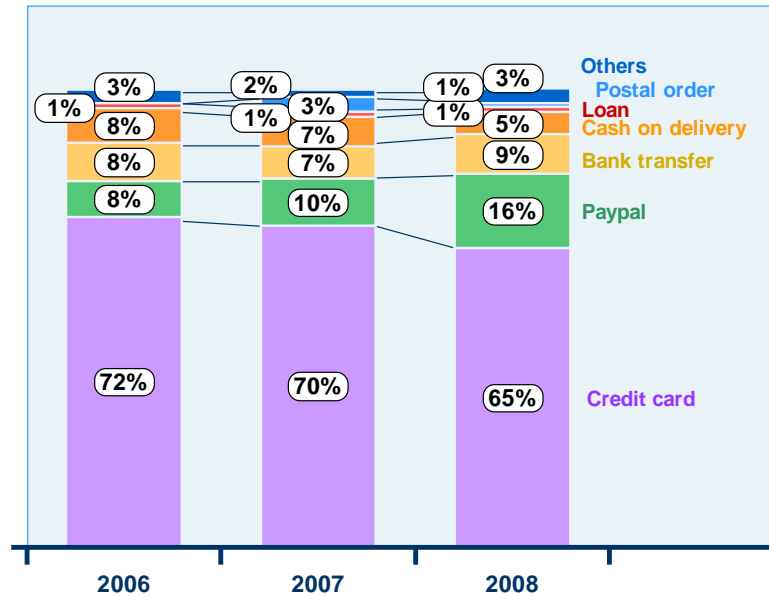

Figure 3 – Split of the eCommerce value by payment system

We report the main figures for the most important industries in Italy in 2008:
- Tourism. The penetration of the credit card, which is the only system accepted in the most of the cases, is higher than 90%. The bank transfer (9% of the value of transactions) is used for the high value transactions (that overcome the plafond of the credit card).
- Consumer electronics. Credit card and Paypal support together the 40% of the value of transactions. Cash on delivery represents the 24% (it decreased with respect to 2007 when it was 30%), while the bank transfer the 15%.
- Insurances. The 50% of the sales is supported by credit cards. This is the industry with the largest diffusion of the bank transfer (35%), since the high value of the order (more than €400).
- Apparel. Credit card and Paypal represent more than the 80% of the value of the sales by the Italian merchants, while the cash on delivery the 15%.
- Books, CDs and DVDs. Also in this industry credit card and Paypal are the most diffused payment systems with more than the 60% of transactions. Cash on delivery follows with 15%.
- Grocery. This is the only industry in which the cash on delivery is the most diffused payment system (70% of the value of transactions).

Trust building in the ePayment is low: 52% of the Italian Internet Users is afraid of using

the credit card online (Figure 4). Trust varies according to where the payment process takes place (online Vs offline) (table 1).

Trust measures the customer attitude to consider the payment tool as a safe system and it is very important in affecting the consumer behavior online. There is of course a relationship between the security and the trust (i.e. the lower the security, the lower the trust), but the perception can be also very different from reality. The analysis of this dimension requires a customer perspective and as a consequence the only way to get a measure of the trust is through a survey among the consumers. According to the Eurisko[1], in 2008 52% of the Italian Internet Users is afraid of using the credit card online and this is the main reason why they do only a limited shopping on the Internet. The question asked in the survey was: "Do you shop a limited number of items on the Internet because you are afraid of using the credit card online?" 26% of the Internet Users "Totally agree" with this sentence, while the 26% just "Agree" (total 52%). The value has decreased over the past years from 65 (2000) to 52% (2008), but with a low pace and the trust still seems to be not high enough.
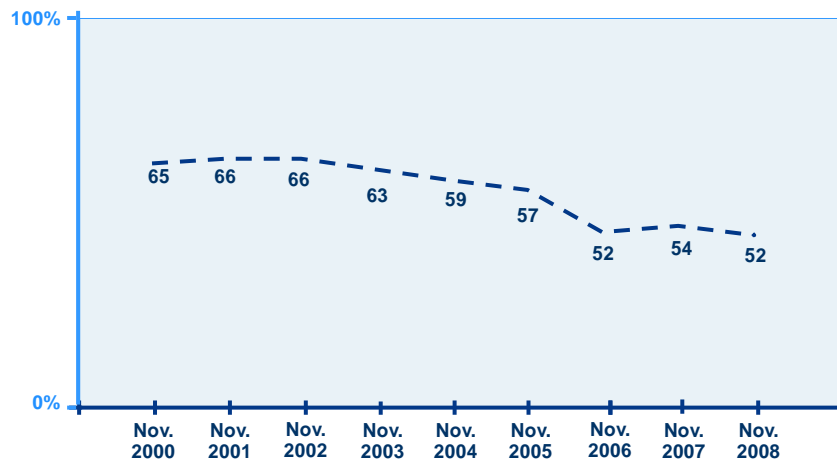

Figure 4 – Trust in the credit card (Italian consumers) expressed as % of Internet Users who are afraid of using their credit card on the Internet (2000-2008) – Eurisko 2009

Starting from the results of the Eurisko's Research we tried to assess the different payment systems in terms of trust (Table 1). Since they are completely managed online and require personal data (credit card or bank account numbers) the credit card and the bank transfer got a "Low" mark. The eWallets were born to overcome the perception of low security of the credit cards, but they are still managed online (they got a "Medium" score). The loan can be partially managed online, but it still requires a few documents to be printed and signed (it got a "medium" score as well). Traditional systems (i.e. cash on delivery and postal order) got a "High" mark, since the customer, by managing the transactions completely offline, consider them the safest ones.

	Standard Credit card	Pre-paid credit card	Bank transfer	eWallet	Cash on delivery	Loan	Postal order
Trust	L	L	L	M	H	M	H

Table 1 –Trust in the different payment systems

Security of the credit cards supporting the B2c eCommerce transactions is very high: the online frauds in Italy represent about 0,2% of the value of the online transactions in 2008 (Figure 5). Moreover, most of the frauds take place offline. The incidence of frauds on the value of the Italian B2c eCommerce is quite different according to the specific industry (Figure 6).

The overall value of the frauds is negligible (€12 million both in 2007 and 2008) and its incidence even decreased (from 0,23in 2007 to 0,20 in 2008). Moreover all the merchants of the sample confirmed that no credit card number has been stolen during an eCommerce transaction on a secure server.

Frauds

+21%

+23%

-50%

0%

6.090 mln di €

€20 mln

€5.032 mln

€4.107 mln

€12 mln   €12 mln

2006   **2007**   **2008**

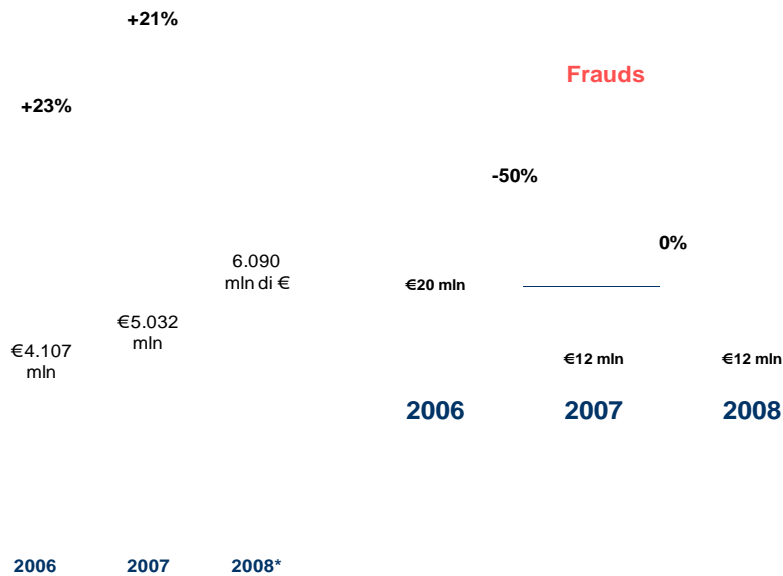**2006**   **2007**   **2008***

Figure 5 – The weight of the frauds on the value of the B2c eCommerce in Italy (2006-2008)

The most common ways through which the frauds take place are the following and none of them happens on an eCommerce website:

- the credit card number is stolen in an offline transaction;

- the data of the credit card and/or the bank account are stolen through the "online phishing" (i.e. the customer receives a fake email from the bank and or the credit card issuer asking for the data);

- the data of the credit card and/or the bank account are guessed by a software that generates plausible numbers.

The data stolen then can be used to make purchasing on the Internet. In this case, as confirmed by CartaSi, there is no risk for the credit card owner who is always refunded. The risk could be for the merchant that gives the authorization for a fraudulent transaction losing the money he should get from this sale.

0,2% is an average figure which stems from very different situations in the various industries. More in detail, in some industries the frauds are more important (Apparel, Tourism and Consumer Electronics) while in other sectors they are negligible. In the Tourism sector, the frauds are very often related to the plane tickets and they are carried out from abroad (e.g. in the Far East countries) when it's difficult to catch them (e.g. during the weekend). In the Apparel and Consumer Electronics industries the frauds are due to the high value of the products that are very easy to be re-sold.
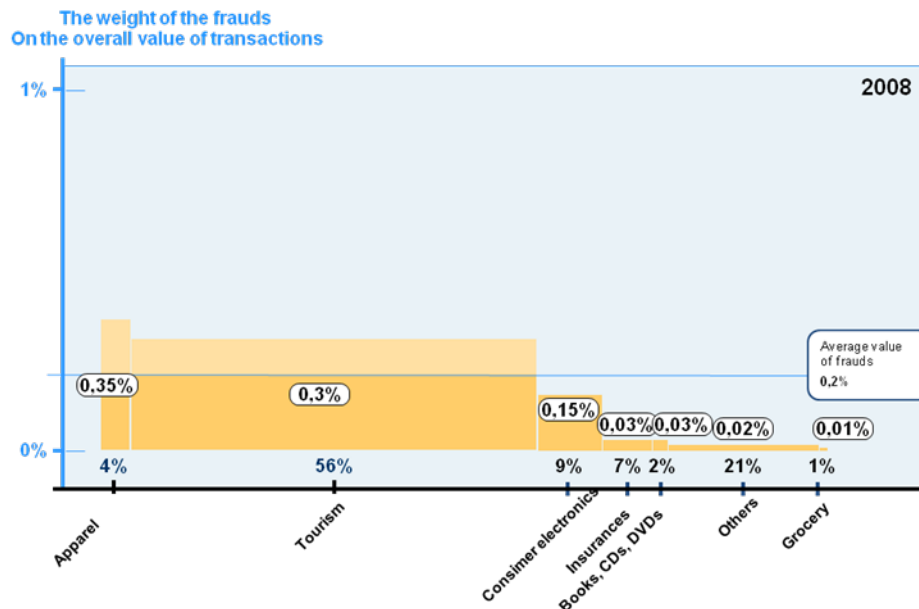

Figure 6 – The weight of the frauds on the value of the B2c eCommerce in Italy in the most important industries (2008)

Fraud prevention systems are widely adopted among the top 100 eCommerce websites: 4 out of 5 adopt at least one of them (Figure 7).
In order to prevent the frauds many systems have been introduced in the last years. The most diffused ones are:
- 3D-secure systems (Verified by Visa and Secure Code by Mastercard), that require both an extra user id and an extra password to close the payment. The

extra user id and password can be considered the electronic signature of the customer. The additional data is separately sent to the credit card owner who is the only one who have this piece of information. The 3D secure systems give full coverage for the merchants (i.e. if they are victim of a frauds they will be fully refunded). The adoption of these systems will be compulsory by the end of 2012.

- CVV2/CVC2/CVA2/4DBC, i.e. the 3 digits code (4 digit code for the 4DBC by Mastercard) in the back side of the credit card. This systems are of course easier to use than the 3D-secures, but they are less effective.
- Electronic wallets (Paypal, Bankpassweb, etc.). The way they work has been already shown in the previous paragraph.

The diffusion of the anti frauds systems increased in 2008 (Figure 7): more that the 80% of the merchants of the sample adopted at least one system (with respect to the 57% in 2007) and approximately the 75% has at least two of them (with respect to the 44% in 2007). The most diffused system is the CVV2/CVC2/CVA2 which has been adopted by the 80% of the merchants. The 4DBC is used by the 35% of the players (those who accept the American Express). The 3D secure systems have been adopted by two merchants out of three. The eWallets gained a pretty good diffusion with Paypal (35% of the merchants of the sample adopted it) and Bankpassweb (15%).

The effectiveness perceived by the merchants is high for the 3D secure systems, medium-high for the CVV2/CVC2/CVA2/4DBC and medium-low for the eWallets.
Most of the merchants interviewed declared that in addition to the standard fraud prevention systems they cross-check all the main information (credit card owner, credit card user, address of destination, etc.) in order to effectively prevent the frauds.
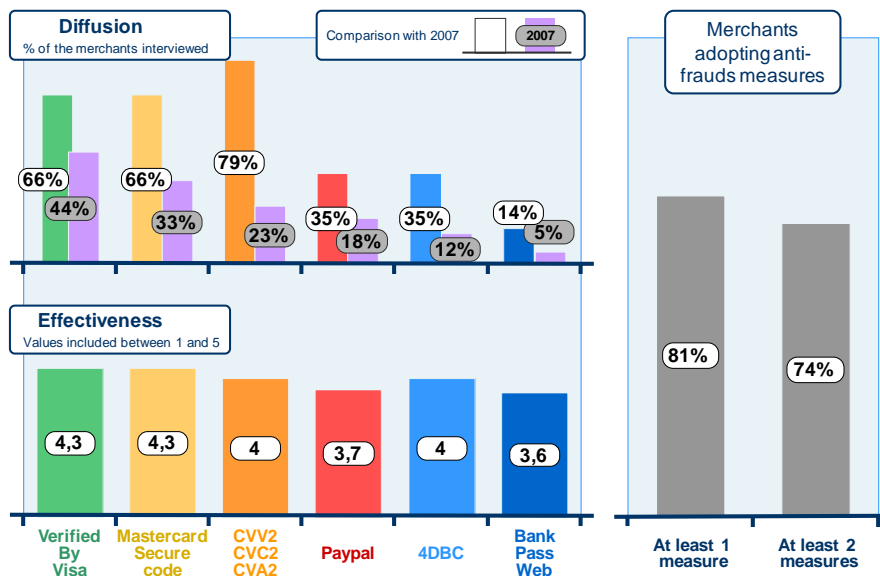

Figure 5 – The diffusion of the most important anti-fraud systems and the perceived effectiveness.

OVERALL ASSESSMENT OF THE PAYMENT SYSTEMS

We provide a classification (Table 2) of the most important payment systems according to the main performance metrics identified through both the case studies/survey and the literature analysis by using a scale made of 3 values ("High", "Medium", "Low"). If the impact of the payment tool on the specific performance metric is positive the value is "High", while if it is negative the value is "Low" (the more positive the impact, the higher the value - e.g. if the cost of using/offering a payment system for the customer/the merchant is significant the value will "Low", while if the payment system is very cheap the value will be "High" since it has a positive impact on the transaction).

The main performance metrics we took into account are:
- Application fields/flexibility. Basically it is the capacity to support the customer in the purchasing. A payment system might have a limitation in use by the customer for at least three different reasons:
  o Type of product/service. There are goods/services that need a real time transaction as a confirmation for the booking (e.g. all the services in the Tourism industry, a mobile top up, a ticket for an event) and as a consequence not all the payment system can fulfill this requirement. The systems which support a real time transaction (credit card – both pre-paid and standard – and eWallet) got a "High" mark. Loan and bank transfer have some complexity to be managed that do always let the customer finish the transaction very quickly (sometimes they can require even a few days), but they can be managed entirely online (they got a "Medium"). Finally cash on delivery and the postal order require an offline transaction that is a limitation for the purchasing of many types of products/services (they got a "Low" mark).
  o Adoption of the payment tool (merchant's side). The merchants do not always adopt all the different payment systems due to the management complexity and the high costs of providing them. The availability of a payment system is also affected by the origin of the customer: if the customer lives in another country, he likely cannot use all the payment system offered by the merchant (e.g. loans can be provided to the customers living in the same countries of the merchants). Credit card is the most adopted payment system online (all the merchants accept them – "High" mark), while the bank transfer and the eWallets, despite the growing diffusions, have not been adopted by all the merchants ("Medium"). Cash on delivery, loan and postal order have been adopted by a minority of merchants ("Low").
  o Amount/Plafond (maximum expenditure)/ Value of the purchase. Since some payment systems have a limitation in terms of minimum and or maximum value of the transactions, they can't support all the transactions. Bank transfer has no limitation and as a consequence it got a "High" score. Even though for different reasons the majority of the systems got a "Medium" mark. The standard credit card has a plafond (depending on the contract signed by the customer) and the same limitation is still valid for the eWallet since it leverages the credit card. A loan can be asked for transaction higher than a specific amount. The cash on

delivery and the postal order got a "Low" score because the use of cash does not let the customer pay high amounts (the postal order can be paid at the post office by cash only).

- Costs. It measures the cost of using the system from the customer's point of view and of offering the system from the merchant 's.
  - o Merchant. The bank transfer, the loan and the postal order are completely free for the merchant so they got a "High" mark. The credit card and the eWallets have a percentage fee on the value of the transaction depending on the number and the overall value of the transactions made during a year (the higher the number/value of the transactions, the lower the percentage fee), but the eWallet fee is on average higher than the one of the credit card. That's why the credit card got a "Medium" score, while the eWallets a "Low" one. Cash on delivery is quite expensive for the merchant and it got a "Low" score.
  - o Customer. If the transaction involves other players in addition to the usual ones, the customer will have to pay a fee for the transaction management. In order to pay through cash on delivery the customer can have even a €15 extra fee since the express courier is in charge of the management of the transaction. The loan is even more expensive, because in addition to the interest connected to the loan, there is also a fee for the management of the transactions. These payment systems got a "Low" mark. The transaction by the standard credit card is completely free of charge for the customer and it got a "High" mark. In order to use the pre-paid credit card, the bank transfer and the postal order cost the customer has to pay a low fee for every transaction (for the pre-paid credit card there is a fee every time he tops it up).
- Usability. This is the capacity of the payment system to be easily used by the customer. It can be measured through the time spent by the customer to get through the different activities required to complete the transaction. Credit cards (both standard and pre-paid) and eWallets are the easiest systems to use. They require only a few information items (the main data of the credit card or the user and the password of the eWallet). The bank transfer requires a few activities on the eBanking website. For these reasons they got a "Medium" score. Both the loan and the postal order imply a few activities that require a certain amount of time to be completed.
- Speed of transaction. It measures the capacity to close the transaction (a transaction is closed when the money is received by the merchant or the merchant gets a payment confirmation) quickly, as soon as all the activities to make a transaction have been accomplished by the customer. The mark is "High" for the credit cards, eWallets and the cash on delivery, since the time lag between the end of the activities by the customer and the end of the transaction is negligible. The bank transfer can require a few days (if the merchant wants to see the money on its bank account) or a few minutes (if the receipt is enough) and he got a "Medium" score. The loan and the postal order are the slowest since they require a few days to be completed.

- Added services. It measures the capacity to provide extra services (with respect to the payment / transaction management). The only two payment systems which offer added services are the loan (by definition) and the eWallets (e.g. Paypal covers the transaction on eBay up to €1.000).

	Application fields/flexibility			Costs		Usability	Speed	Added services	Average performance
	Type of product /service	Adoption (merchan t side)	Amoun t	Merchant	User				
Standard credit card	H	H	M	M	H	H	H	L	**M/H**
eWallet	H	M	M	L	H	H	H	H	**M/H**
Pre-paid credit card	H	H	L	M	M	H	H	L	**M**
Bank transfer	M	M	H	H	M	M	M	L	**M**
Loan	M	L	M	H	L	L	L	H	**M/L**
Cash on delivery	L	L	L	L	L	M	H	L	**L**
Postal order	L	L	L	H	M	L	L	L	**L**

Table 2 – The performance of the payment systems

On the basis of the average performance, as reported in the last column of Table 2, payment systems can be clustered into four different groups:

- "eCommerce Best fitting" (M/H - Medium/High value). This cluster includes standard credit card and eWallets which seem to be the most appropriate tools to support eCommerce transactions. They do not show any particular limitation;
- "eCommerce Appropriate" (M - Medium value). In this second cluster we find the pre-paid credit card and the bank transfer. The former has a higher cost for the customer and, on average, a lower plafond with respect to the standard credit card. The latter on the one hand is neither in real time nor fast and it has a fee for the customer. On the other hand it is free for the merchant and it supports transactions for any amount of money;
- "eCommerce Only if necessary" (M/L and L - Medium/Low and Low value). This cluster includes loan, cash on delivery and postal orders. Loan is not very diffused, not that easy to use, neither fast nor in real time, but it is of course a service by definition for those who cannot or do not want to afford an expensive purchasing. Cash on delivery and postal orders have many limitations in almost all of the analyzed fields.

CONCLUSIONS

There is a correspondence between the suitability of the payment systems in supporting B2c eCommerce transactions and their diffusion. The "eCommerce Best fitting" (i.e the

most appropriate for the B2c eCommerce) payment systems are the most diffused ones: credit cards and eWallets together represent the 80% of the eCommerce value in Italy. The bank transfer that has been defined as an "eCommerce Appropriate" system is the third most diffused payment system with 9% of the value of the Italian B2c eCommerce transactions. Finally there are all the other payments systems ("eCommerce Only if necessary") whose diffusion is almost negligible. As a consequence the diffusion of the different Payment systems seems to be first of all driven by their capacity to be suitable for online transactions.

Trust does not seem to be the critical factor driving the diffusion of the payment systems. The correlation of the diffusion with trust is negligible with respect to the one with suitability. Despite their high trust, cash on delivery and postal orders are not very diffused, while the credit cards, despite their low trust, are the most diffused payment system. A further element proving this phenomena is the importance of the Tourism industry in Italy (that in 2008 with €3,2 billion represented the 50% of the Italian eCommerce market and has boosted the growth of the overall Italian market in last 6 years) where credit card, the most of the times, is the only system accepted. The second industry in terms of value of transactions is the Consumer Electronics that, despite the wider range of payment systems, is worth one fifth of the Tourism sector.

There is no correspondence between trust and real security. The case studies proved that the security of the credit cards supporting the B2c eCommerce transactions is very high: the online frauds in Italy represent about 0,2% of the value of the online transactions in 2008. Moreover, most of the frauds take place offline. As a consequence the fear of the online frauds when doing the shopping online is completely unjustified.

The risk of fraud is on the merchant side only. If the merchant gives the authorization for a fraudulent transaction, he will lose the money he should get from this sale. Fraud prevention systems are widely adopted among the top 100 eCommerce websites: 4 out of 5 adopt at least one of them.

In the end the payment systems cannot be thought a real barrier for the eCommerce development and the reasons of a diffusion of the B2c eCommerce still limited should be looked for in other fields.

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