

MAIN CHARACTERISTICS OF THE PAYMENT CARD BUSINESS IN SERBIA

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Abstract – Out of all electronic payment systems known in Serbia, payment cards represent the only system that is massively used. Over the past eight years almost all banks in Serbia have started issuing cards, and they have their own systems for card acquiring. The main characteristic of the payment card business in Serbia is a lack of a clearing center for payment cards issued in Serbia (except for domestic Dina Card). This then results in unnecessary expenses having negative influence on payment card business. It has also been proposed to establish a national switching center that would make transaction procession cheaper and have only one point for connection with VISA or MASTERCARD centers.

Keywords: debit card, credit card, switching center, interchange fee, clearing, settlement

INTRODUCTION

The first electronic system for the use of Visa card on ATM terminals was introduced by Beobanka at the beginning of 1997. At that time the first transaction with Visa Center in London was carried out as well. During 1998, several banks and saving houses introduced quasi systems (ATM with a PC computer), which simulated automatic card acceptance and transaction processing.

Development of payment systems based on payment cards experienced a real boost in Serbia in 2003. At the beginning of 2004, twelve leading banks in Serbia were issuing cards and had their own ATM and POS terminals (at the end of May 2004, about 220 ATM's and about 8,500 POS terminals [1][2][3]). Most of the ATM's were in Belgrade.

Since 2004, major changes have occurred in the banking sector. Almost all banks in Serbia have been privatized, and many foreign banks have appeared in the Serbian market. In the middle of 2006, there were 34 banks. In the

middle of 2010¹ there were 2,793 ATM's, 58,787 POS terminals and 35 banks operating in Serbia. Now there are only three domestic (Serbian) banks.

INDICATORS OF THE CARD PAYMENT SYSTEM IN SERBIA

The number of ATM and POS terminals has also changed over the past 5 years. An overview from 2005² to the middle of 2010 is given in Table 1.

Year	Number of ATM's	Number of POS's
2005	837	31.816
2006	1.348	48.194
2007	2.074	55.340
2008	2.494	57.919
2009	2.723	59.058
2010*	2.793	58.787

Table 1. Transactions on ATM's and POS's

¹ All the data for 2010 refer to the first half year, and they served as a basis for some forecasts given for the entire 2010.

² All the data for years 2005-2009 refer to the end of year.

A rough analysis of these data can lead to a conclusion that over the past year end half the increase in the number of ATM's has slowed down (in the first half of 2010 there were only 70 new ATM terminals), and that due to the effects of the global economic crisis even the number of points of sale has reduced (from 60,857 in the first quarter of 2009 to 58,787 POS terminals at the end of the second quarter of 2010).

Depending on the card type, there are also large differences in the number of delivered cards in the period 2005-2010 (Table 2) [3]. Number of debit cards compared to credit ones is much higher. Number of debit and business cards records a growing trend in the entire period.

Year	Debit	Credit	Business	Total
2005	3.443.015	382.158	33.129	3.858.302
2006	4.327.537	857.608	55.237	5.240.382
2007	4.613.448	1.039.042	72.975	5.725.465
2008	4.548.241	1.082.771	97.777	5.728.789
2009	4.884.814	1.022.544	107.032	6.014.390
2010	5.039.842	946.896	107.734	6.094.472

Table 2. The number of different types of cards in Serbia [3]

Table 3. shows that over the past five years (2006-2010) the share of active cards³ in the total number of delivered cards has amounted to about 47% (it varies from 46% to 48%) [3]. This shows that habits of card users practically haven't changed. It is also another indicator of stagnation in the card business. At the end of second quarter of 2010 there was 2.078.265 debit, 683.254 credit and 61.798 business active cards.

Year	Debit	Credit	Business	Average
2005	33%	78%	83%	35%
2006	42%	71%	65%	47%
2007	42%	71%	65%	47%
2008	41%	73%	60%	48%
2009	41%	71%	56%	46%
2010	42%	71%	57%	47%

Table 3. The percent of active cards in total number of cards in Serbia [3]

³ An active card is the one that performed at least one transaction in the report period. Since the second quarter of 2007, cards used only for raising cash at the issuing bank premises are not considered active cards.

Table 4. gives an overview of the number of transactions, turnover and average transaction value recorded outside the Republic of Serbia with cards issued in Serbia [3]. The total value includes data referring to ATM's, Points of Sale (POS terminals) and bank teller windows. From 2005 to 2009 the number of transactions increased from 691,072 to 1,879,336 transactions. The average transaction value in euros in this period decreased from 106 to 84 euros. The turnover increased from 73.2 million euros to 159.7 million euros.

Year	Number of transactions	Turnover in million euros	Average transaction value in euros
2005	691.072	73.2	106
2006	1.079.389	104.9	97
2007	1.427.313	135.9	95
2008	1.841.911	178.1	97
2009	1.879.336	159.7	85
2010	1.046.655	87.5	84

Table 4. Number of transactions and turnover outside the Republic of Serbia with cards issued in Serbia [3]

If we analyze the values in regards to the place – ATM's, POS or bank windows, we reach the following conclusion. Turnover at bank windows amounted about 1.4 million euros per year. Turnover on POS terminals is almost three times higher than on ATM's. So, citizens of Serbia mostly use cards abroad for buying goods and services, while cards are used domestically for raising cash to a much lower extent.

Cancellation of visas for the European Union countries hasn't significantly influenced an increase of consumption and activities of cards outside Serbia. Effects of the global economic crisis are evident. While the number of transactions is growing, turnover and value of transaction are decrease.

Table 5. gives an overview of the number of transactions, turnover and average transaction value recorded in the Republic of Serbia with cards issued outside Serbia [3].

Turnover of foreign cards is constantly growing and it is especially a result of the increase in the number of tourists, and is highest in summer months, which is expected.

Year	Number of transactions	Turnover in million dinars	Average transaction value in dinars/euros
2005	1.374383	12.956	9.427 / 117
2006	2.034.636	18.760	9.220 / 110
2007	2.942.316	23.758	8.075 / 101
2008	4.235.763	31.043	7.329 / 88
2009	4.849.673	36.180	7.460 / 80
2010	2.503.162	18.212	7.260 / 74

Table 5. Number of transactions and turnover in Serbia with cards issued outside the Serbia [3]

MAIN CHARACTERISTICS OF THE CARD BUSINESS IN SERBIA

The main characteristic of card operations in Serbia is a lack of a joint clearing center. Every bank has its own system for acceptance and processing of transactions. The processing is most often carried out by providers abroad. Some banks even have several providers for various types of cards and various POS terminals. Banca Intesa has even 3 providers [2][4]. Most of these providers are foreign companies, and thus huge part of profits from cards operation goes outside of Serbia. Except for DINA CARD [4], which is accepted by POS terminals of all banks, other cards are most often accepted only by terminals of those banks. It results in the fact that one merchant has several POS terminals and several contracts with several banks. All these facts make card operations expensive and complex.

Settlement of payment by domestic cards is performed via providers and completed via banks in Serbia. Clearing of transactions with VISA and MASTERCARD cards are completed via appropriate centers in London and Brussels, and thus huge part of profits goes out of Serbia. This is absolutely unnecessary and harmful for the state, traders and consumers, as well as banks. The clearing center for DINA card is located in the National Bank of Serbia, and all transactions are performed through it.

Such a situation is unfavorable for the entire country, but also for all participants in the payment card system. Merchants have high expenses due to the high merchant commissions. They were therefore forced to increase their prices, which was ultimately paid by all consumers (not only card holders), who pay much

higher prices for products in shops that accept payment cards. Of course, merchants have benefits from accepting cards since their sale increases, and the needed workforce is reduced.

Interchange fee represents the fee that is paid by the merchant's bank toward the card-issuing bank for each transaction carried out with a payment card issued by that bank. When a card holder uses the card for paying for products, the trader does not obtain the full amount of money for sold products and performed services. This amount is reduced for the amount of expenses incurred by the merchant's bank (card acquirer), the card-issuing bank and card scheme that process transactions, during processing of transactions carried out with payment cards. Card issuing banks usually invest part of their income from interchange fees in promotion of payment card usage. "Small" card issuing banks greatly rely on interchange fees as significant financial sources in payment card operations, and according to various analyses, payment card operations are among most profitable activities of „big“ banks.

Payment card holders can have significant benefits offered to them by card issuing banks, such as:

- reduction or cancellation of annual card usage fee,
- lower interest rates,
- discounts, and so on.

On the other hand, consumers that don't use payment cards pay higher prices for products of merchants who decide to allow card payments, because merchants usually transfer their costs of card payment processing and interchange fees to all the goods they sell. Benefits of merchants that accept card payments lie in an increase of sale, as well as reduction of workforce expenses, but certain analyses have confirmed that, with big trade chains, an increase of expenses resulting from card payments significantly exceeds the increase of sale. Besides, they also underlined that the fact that they cannot refuse popular card payments, as well as the fact that they cannot form higher prices of products if payment is performed by payment cards, and lower prices when it comes to cash payments, result in higher prices of all goods and services, while their negotiating power regarding costs of payment card processing is limited.

The increased rates of interchange fees over the past years, together with an increase of the number of transactions performed by payment cards, have led to an extremely high growth of interchange fees, and thus a growth of expenses incurred by merchants for that purpose as well. These expenses are ultimately transferred to end consumers, who pay much higher prices for products.

Merchant commission fees in Serbia are not standardized, and in most countries they are regulated by appropriate laws and have various amounts. The fees are dependent on contracts and are most often higher than 3% of the retail price. Over the past years, in many countries they have been reduced, or their reduction is planned. In Denmark, the fees for Visa and MasterCard have been reduced from 0.75% to 0.4% (maximum 4 DKK). In Israel, they intend to reduce the fee from 1.255 to 0.875% until 2012, in Spain from 3.325 to 1.1%, and in Switzerland from 1.65%-1.70% to 1.30%-1.35%.

We should have in mind that Serbia is among a few European countries that do not have a joint card center, except when it comes to domestic DINA card. The switching and clearing center for DINA card is the National Bank of Serbia. This shows that there is knowledge, as well as needs and possibilities for realization of a similar solution when it comes to other card types, i.e. VISA and MASTERCARD. Hungary, Turkey and Slovenia also have national centers for card transaction processing, but even much less developed countries in our neighborhood, such as Bulgaria and Bosnia & Herzegovina have them as well.

Payment transactions carried out by Visa payment cards are processed through the Visa Net telecommunication network, which connects Visa members with one of its centers. For the needs of clearing payment transactions performed by Visa payment cards in national currency, Visa International offers an optional service to countries – the name of the service is NNSS - National Net Settlement Service, and it is used for calculating net-items of transactions in which the merchant, acquirer and card issuer are in the same country, and the transaction currency is the local currency. A lot of countries use this service so that settlement transactions between the card issuer and acquirer could be

performed in that country and in the local currency.

Within MasterCard, payment transactions are processed through the BankNet telecommunication network which, as in the case of Visa, connects MasterCard members with processing centers, and through which transactions are routed to authorization. As for procession of MasterCard transactions in local currency, there is a system called MasterCard International Services for IntraCountry Settlement, within which transactions performed with a merchant located in the same country where MasterCard payment card was issued are treated as "Intracountry" transactions, and are processed via the MasterCard Interchange system. A card acquirer must submit to MasterCard all transactions in the currency in which they were performed, and after that MasterCard performs calculation of net-items and sends a notification about that to members (banks), as well as the institution performing final settlement (central bank, for instance).

The practice of countries that have established national payment card systems on the basis of usage of Visa and MasterCard payment cards issued in the territory of those countries is not the same in all countries.

Regardless of services offered to countries by Visa and MasterCard for clearing of payment transactions in national currency on the basis of usage of payment cards issued in those countries, most countries have established national payment card systems in which clearing of these transactions is carried out, and settlement of calculated net-items is performed in the national RTGS system.

Bulgaria and Turkey have only one payment card system on their territories in which clearing of the said transactions is performed, while in Poland and Bosnia&Herzegovina, besides the system organized at the national level, it is also possible to use services of Visa – NNSS and MasterCard for clearing of the said transactions. In Slovenia, when they had their national currency there was "The Slovenian National Net Settlement Service" (Clearing Visa), which calculated net-items by Visa payment cards performed on the territory of the Republic of Slovenia. In the first stage, the settlement agent was Abanka Vipava d.d., and then the Bank of Slovenia.

Such centers can be organized pursuant to various models and there are various solutions in Europe and the world. Card payment centers may be private or founded by state institutions. They can also be profit or non-profit organizations. For instance, in France it is a non-profit organization financed by 11 biggest banks that pay for its operation, and if there is a profit at the end of the year it is distributed proportionally. In Britain, it is a private profit organization.

The first attempt of establishment of a single switching (and maybe clearing) center in Serbia occurred in 1998 with support of the Association of Banks. They even announced a tender for realization of this center, but in the end they gave up the idea.

Although at the end of May 2004 the Association of Banks and 13 small banks in Serbia made a decision on realization of a joint system for accepting transactions, nothing has been done so far [2].

Over the past several years, several banks have intensively worked on construction and/or renewal of their infrastructure in order to become capable of issuing and accepting cards, to become members of Visa and/or Europay, and to work on installation of ATM and/or POS terminals. Having in mind that all these banks cannot oblige their partners to use only their private networks of ATM and POS terminals, the need for construction of a switching center for interbank card transactions has increased [3][5][6], and we suggest that all possibilities should be analyzed and that all relevant factors should be included that can provide a safe and reliable system, open communications solution and rapid development.

With appearance of new payment tools, risk management is the main disputable issue that has to be carefully considered. Decisions on the systems to be accepted must be based on their openness and communicativeness. A selected system must be capable of rapid adjustment to constant development and market needs.

The future interbank network should be a switching center for payment card transactions among all banks and should:

- promote development and the use of payment cards in Serbia,

- accept cards from international organizations for payments or cash raising in Serbia by tourists and businesspeople,
- create a joint possibility of handling payment card transactions and eliminate the need for multiplication of human and financial investments.

With construction of joint infrastructure, the future interbank network would be capable of becoming an authorization center that would be operational seven days a week and 24 hours a day, connected with international organizations such as Visa and Europay, and optionally it would be a center for: handling ATM's and POS's, card personalization, card operations intended for some banks, and a clearing institution that prepares calculations.

Existence of an interbank card organization would significantly facilitate and make card business cheaper (especially referring to acceptance of cards by traders), and enable obtaining benefits during negotiations with both domestic and international service providers, such as Europay and Visa.

Countries that have applied the national payment system modality for calculation of net-items of payment transactions in domestic currency on the basis of usage of payment cards issued in those countries, and for which the final settlement of those net-items is performed in the national RTGS system, can manage the settlement risk in those systems more successfully (a risk that one of participants does not have enough money on the account for settling his position). Besides, organizing settlement of net-items from clearing in the RTGS system also fulfills one of the main BIS principles – to perform settlement of payment transactions in central-bank money, i.e. via accounts open in the central bank. On the other hand, establishment of a national payment system for clearing by Visa and MasterCard payment cards creates more possibilities for influencing the amount of interchange fees. When using Visa – NNSS and MasterCard services for clearing of the said transactions, banks are obliged to apply interchange fees determined by those card schemes.

In the Republic of Serbia, settlement of net-items from clearing by Visa and MasterCard payment cards is performed in the RTGS of

the National Bank of Serbia, which fulfills one of the main principles – settlement in the central-bank. However, calculation of net-items of payment transactions in dinars on the basis of usage of Visa and MasterCard payment cards issued on the territory of the Republic of Serbia is not performed in our country, which is possible, having in mind experiences of the said countries. This would provide for performing these transactions at much lower price, which would be useful both for banks and the real sector. At the same time, the institution that would perform clearing of these transactions (National Payment Card Center of NBS) would record significant income that is now collected by Visa and MasterCard.

CONCLUSION

The main characteristic of electronic payment system development in Serbia over the past five years is the extensive usage of various card types. This work analyzes current situation of card usage and gives suggestions for further development. Economic indicators undoubtedly show that since the beginning of 2009 card business has been in stagnation.

The main characteristic of this business is a lack of a national card center. Every card-acquiring bank has its own provider. Some banks even have several providers (for various card types, for ATM and POS terminals). Most providers are abroad. All of this points at huge costs of processing and communication.

We have analyzed the need for realization of a national card center, as well as demands and possible uncertainties regarding its status.

We have undoubtedly proved that existence of such a center would be not only socially justified and useful for the state of Serbia, but it would also create a lot of advantages for all participants in the card payment system, and contribute to further development of the card business in Serbia.

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