*Original Scinetific Paper*

# *Multilateral Interchange Fees in Serbia and their impact on card payment systems development**

*UDK 336.747.5(497.11:4-672EU)*

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***Summary:***
*The establishment of policies and incentives for the issuance and card acceptance worldwide is the necessary basis for the development of card based payment instruments. Multilateral interchange fees (MIF) played a major role in creating the appropriate sets of incentives for acceptance and issuance while balancing the interests of market participants. The goal of this paper is to present the developments in the area of MIF regulation across the European Member States, as well as in Serbian payment cards market, and to suggest the way forward towards possible Serbian payment systems participation in the Single European Payment Area (SEPA) in the future.*

***Key words:***
*Payment Cards, International Card Schemes (ICS), Multilateral Interchange Fees (MIF), Single European Payment Area (SEPA)*

***Rezime:***
*Uspostavljanje pravila i inicijativa za izdavanje i prihvatanje kartica širom sveta predstavlja neophodnu osnovu za razvoj ovih platnih instrumenata. Multilateralne međubankarske provizije MIF (Multilateral Interchange Fee) igrale su glavnu ulogu u kreiranju skupa inicijativa kojima su balansirani interesi tržišnih učesnika. Cilj ovog rada je da predstavi dešavanja u oblasti regulacije multilateralnih međubankarskih provizija u karticnim sistemima u zemljama članicama Evropske Unije, kao i na srpskom tržištu, i da sugeriše mogući put Srbije ka učešću u jedinstvenoj platnoj zoni Evrope (Single European Payment Area, SEPA) u budućnosti.*

***Ključne reči:***
*Platne kartice, međunarodne kartične šeme, multilateralne međubankarske provizije (MIF), jedinstvena platna zona Evrope (SEPA)*

*** This papar forms part of the results of research on project III44006 financed by Ministry of Education, Science Technological Development of the Republic of Serbia**

# 1. INTRODUCTION

These days, citizens of Serbia as well as citizens of other countries can present a domestically issued credit or charge card virtually anywhere in the world and be assured that the card will be accepted by merchants who have agreed to accept cards issued on the ICS. This is a huge achievement of global financial integration secured without national treaties, agreements or the like and created entirely by the initiatives of the private sector to meet the needs of their customers.

The International Card Schemes ("ICS") are usually defined as those card schemes or networks that are globally inter-operable and exist outside the country specific schemes. These include the two major 'four-party' schemes of Visa and MasterCard together with 'three-party' proprietary schemes such as Amex, Diners, JCB and Discovery. Central to the development of these payments networks has been the creation of scheme rules and incentives that drove merchant acceptance and card issuance throughout the world.

The 'four parties' model refers to parties that are involved in a card payment transaction: merchant, merchant (acquiring) bank, issuing bank and cardholder. It is to be notified that the model itself has 5 parties, where fifth party is card payment organization (network) itself (Visa, MasterCard) which coordinates funds transfer and information exchange between the parties.

The 'four-party' payments system is usually contrasted with the 'three-party' or 'closed loop' model used by proprietary cards such as Amex and Diners Club where card issuing and acquiring are performed by the same organization. In the last years the 'closed loop' networks have extended their programs and these days they involve deposit institutions (banks) as card issuers. Interchange fees are not being setup in 'closed loop' networks (American Express, Diners) since those organizations are acting as card issuers and acquirers simultaneously.

Multilateral interchange fees (MIF) have played central role in creation of the set of incentives that balance the interests of market participants, so they could be regarded as underpinning for the 'four party' model since they enable sharing of 'merchant commission' revenues among the card issuers and acquirers..

The four parties in the model are:

- *The cardholder*, person who presents the card at Point of Sale;
- *The card issuer*, bank who has the relationship with the cardholder and issues the card;

- *The merchant*, who has no direct commercial relationship with the cardholder and who uses the acquirer to provide the link to the card issuer.
- *The merchant acquirer*, bank who has sold the acceptance service to the merchant and provides fund guarantee, settlement and clearing services; and

All of the model participants should have clear benefits from usage of cards as payment instrument.

Cardholders can enjoy number of benefits provided by issuing banks:

- lowering or cancellation of annual account maintenance fees,
- lower interest rates,
- discounts.

Merchants should enjoy increase in sales of goods and services, lower probability of errors in settlement, reduced cash operations which reduces the need for the staff engagement, and lower costs for insurance and physical security.

Multilateral interchange fees are paid by the merchant acquiring bank to the card issuing bank, and it is very often called ’issuer fee’.

Merchant acquirer bank then sets the ‘Merchant Service Charge’ in the form of a discount, which is assessed against the transaction value at the merchant’s location. Generally, the MIF is the largest single component of the MSC. Merchant acquirer banks usually set merchant service charges unilaterally within the boundaries of commercial negotiations with merchant and under the market conditions, but the cases exist where MSCs are prescribed and regulated by domestic authorities (in Serbian DinaCard scheme for example, but in some Scandinavian countries as well).

Card organizations are also charging so called ’switch fees’ both form issuers and acquirers. The amount received by merchant is lower than transaction amount, ie. Merchant Service Charge which includes: interchange fee, switch fee, other acquirer fees and acquirer’s profit is deducted. It is to be notified that interchange fees are introduced by the card organizations, not the issuers. Beside setting up the interchange fees, card organizations determine operational rules and bylaws that have to be followed by all participants, including processors and merchants.

Card scheme operating rules often include regulations that has significant implication on scheme functioning. For example „honour all card rule“ requests universal acceptance of all cards within the same scheme. Consequently, merchant who accept cards from the particular scheme has to accept all the cards from the scheme and cannot deny or reject cards issued by particular bank (if merchant accept one Visa card, he has to accept all Visa cards form all the issuers). Multilateral fees itself could vary depending on a program or card product.

The other important and famous rule is „no surcharge rule“ which says that merchant cannot ask for additional charge or price increase if the payment is performed with a card form particular scheme. Contrary to this rule, in some countries (USA for example), rules demanding that issuer cannot prohibit offering of additional discounts for cash payments by merchants. This rule is declared outdated in many countries, and major payment schemes are considering cancellation of this rule.

## 2. MULTILATERAL INTERCHANGE FEES

The usage of cashless payment instruments is constantly growing in the EU countries, and highest growth is recorded in usage of payment card which now have largest share in the payment structure. Interchange Fee *IF* as one of the most important parts of payment transaction has been a topic with lot of controversy and it’s been considered by the EU institutions longer than a decade through different types of analysis and surveys but through the official investigations against payment schemes by competition authorities. Controversy is coming out of the fact that IF is tool used for revenue rellocation between issuer and acquirer.

Basic rationale for introduction of interchange fees by card organizations is result of their awareness of higher price elasticity and sensitivity among the issuers as contrasted to merchants who accept cards. Interchange fee increase will motivate issuing bank to issue more cards. At the same time the merchant will not cease accepting certain card since he does not want to loose turnover but the bank could easily switch to issue other brand with higher IF. Within last decade however, there is a general trend of IF decrease which is not result of regulatory measures only but also some other factors such as: economies of scale, technological advances and mutual agreement of the participants.

Multilateral interchange fee is paid by merchant acquiring bank to the issuing bank for every single transaction performed with a card that is issued by issuing bank. When cardholder makes a payment for goods or services he has purchased, merchant does not receive the full amount. In fact, amount he receives is reduced to cover the costs and ensure some revenues transaction processors, acquiring bank, issuing bank and card organizations. Card organizations and issuing banks are then allocating a portion of their incomes for card payment promotion. Small banks relay very much on interchange fee revenues.

Interchange fee is one the fees existing in „four party“ model. The other important fees are: *Merchant fee* that merchant pays to his acquiring bank (the acquiring bank has embedded interchange fee into merchant fee). *Cardholder fee* is paid by bank client to the issuing bank in terms of one off issuing fees,, monthly or annual maintenance fee or similar. Last but not least, there exist *Scheme fees* that are paid both by issuing and acquiring banks and they are usually dependant on number of cards or transactions, ie. business volume.

So called *surcharge fee* is fee paid by cardholder in a terms of increased transaction value. Surcharging was prohibited by card organizations rules in the beginning, anyhow in recent times it is occasionally allowed, and a matter itself is being considered so we might expect even cancellation of *no surcharge* rule in the future.

The competition authorities all over the world are carefully investigating card schemes behaviour in setting up the interchange fees, and more and more models are assessing the effects of competition among schemes and its impact on merchants and cardholders. For example, if cardholders are indifferent on what card brand to use, then competition should lead to decrease in interchange fees, since merchant would rather choose the scheme with lower interchange than other one that performs higher charge.

Eurosystem states that transparency about real costs and benefits of every particular payment instrument makes a necessary condition for establishment of modern and harmonized retail payment system in Eurozone.

ECB states a fact that transparency in the area of card payments, especially interchange fees structure, contributes to development of the open market for the existing card schemes and possibility to establish new ones. It is also stated that if interchange fee IF should exist, it should be set up on a reasonable level and it should not decrease the efficiency of payment instrument. IF has to be set up in a way that it increases the overall economical efficiency and it is compliant with open market rules.

Eurosystem suggested close dialog between card schemes and European Commission so the full compliance of interchange fees with european competition rules could be achieved.

Nederland, Belgium and Sweden regulated IF fees after the complex studies performed by their central banks. *Banca d'Italia* had set up strict rules for IF determination in the period 1998. to 2005. and every change had had to be approved by before application.

The relevant institutions in EU are competition authorities. European Commission and other relevant competition authorities have performed a number of investigations on compliance of card scheme interchange fees with articles 101. and 102. of European Union Treaty.

Over the past decade the European Commission and a number of national competition authorities have intervened increasingly in the plastic card payments networks. Following the developments in the United States, and infamous Wall-Mart case ended up in heavy fines against international card schemes, and under the pressure of European merchant lobbies, the

Commission attempted to regulate the financial item that makes the economic essence of the so called ‘four-party’ card payment schemes – Multilateral Interchange Fee (MIF). The goal of this paper is to present the developments in the area of MIF regulation across the European Member States, as well as in Serbian payment cards market, and to suggest the way forward towards possible Serbian payment systems participation in the Single European Payment Area (SEPA) in the future.

The role of central banks in EU countries and the role of ECB itself is generally neutral in regards to the interchange fee issue. However, by performing the role of payment system catalyst, central banks could contribute significantly to the proper resolution of the issue: first, through public statements and views, and second, by performing the analysis and investigations that lead to better understanding of interchange fees and their effects on payment systems [1]. Aerticle [1] *Occasional Paper Series, No 131/ September 2011 – Interchange Fees in Card Payments* is one of the most important papers of ECB in this area.

Main findings are that IF regulation across the globe in most of the cases is subject of relevant competition authorities. Decreasing of interchange fees itself does not guarantee neither that the retail prices will be decreased consequently nor that the usage of payment cards will be higher. In the case of Serbia, interchange fees could be regulated by local competition authority or by the relevant Government Departments, and the role of central bank will be to collect, investigate and make public relevant information and to take official position through the Statements.

General hypothesis is that any action that might be taken should focus on promoting competition among the card networks and among the banks that participate in these networks, as well as on facilitating competition for merchants and cardholders.

The paper examines different approaches and practices across the Europe and the positions of International Card Schemes (ICS) in particular, who have (more or less loudly) opposed and challenged the Commission’s and local authorities’ regulatory initiatives up to date, stating boldly that these interventions are moving the Europe far from the desired goal – Single European Payment Area, but they also miss the other common objective of those regulatory interventions – the consumer prices remain unaffected and the cardholders enjoy no significant benefits (if any).

This paper will also investigate if there is to be any regulatory intervention at all into the operations of the general purpose card payments networks in Serbia, since imprudent regulatory intervention may restrict the evolution of card payment systems, weaken incentives for product development and innovation, reduce benefits to cardholders as well as to merchants, and provide only limited or no benefits to consumers.

# 3. REGULATION OR FREE COMPETITION

Policy makers all over the world have come to understanding that regulation can impose severe costs on a regulated industry, it is often designed to serve the narrow interests of one group against broader social benefits or another interest group [2], and it can impose new and significant costs required to operate the regulated scheme. It is for these reasons that policy-makers in the EU and elsewhere have increasingly turned away from direct regulation to fostering competition which achieves a more natural balance between the interests of all stakeholders.

Anyhow, there were also some exceptions from those general principles, which showed that regulators are still not ready to deregulate the EU markets in full. In the past years, the Commission has intervened in the plastic cards payments' markets on several occasions and, so they claimed, for a variety of different reasons, but in fact most commonly under pressure of, or initiated by, the merchant lobbies [3], [4].

In general, there are three cost items taken into consideration when interchange fees are determined: operational costs (processing costs, clearing & settlement costs, internal administration costs), costs to ensure payment guarantee to merchants, and fraud prevention costs. With pay later cards there is also fourth item: cost of funding. But it is not always the case. The investigations performed by European authorities had the objective to asses if particular centrally determined IF is a result of mutual agreement of business entities which results in prevention, limitation or distortion of competition (article 101. of EU Treaty) or misuse of dominant position (article 202.). If free competition is found to be threatened, the authorities have to investigate if there are conditions for exception from 101. article. The process involves next steps:

1. Existence of association of business entities which result in competition limitation. In all the cases the authorities have found the interchange fee setup as a tool for limiting competition;
2. Payment scheme justification for setting up the interchange fee IF. For example, in the process conducted by EC, *Visa* has justified interchange fee introduction by 3 cost items that we've mentioned earlier. On the other hand, *MasterCard* had offered the explanation that interchange fee is a tool to balance demand. *Visa* arguments were accepted, the arguments of MasterCard were not;
3. Contribution to technological or economical progress. It is first exception condition in article 101. In the process against Visa in 2002. EC had decided that existing interchange fee contributes to progress. In the later cases, the position has abandoned because of the weak arguments offered by payment schemes;

4. Clients and merchants have to obtain fair share of benefits (second exception condition in article 101.). Having in mind that it is very hard to prove that, first attempt had been made in 2006. by performing so called *Tourist test* in the case against MasterCard;
5. Whether there is alternative less restrictive arrangement in the market (third exception condition). In the process against Visa, EC had found out that alternative arrangement that fulfils the criteria does not exist;
6. Arrangement must not eliminate the competition in regards to essential payment instrument segment (fourth condition).

## 4. EUROPEAN EXPERIENCES AND ACTIONS TAKEN

During the course of the last few years, there were number of actions taken by the European authorities, followed by the number of local country specific measures. Let us recall the most significant ones:

**European Commission Decision of 19 December 2007 concerning MasterCard's intra-European interchange fees**

Most famous intra-European action was taken against MasterCard's MIF fees. The European Commission has decided that MasterCard's multilateral interchange fees (MIF) for cross-border payment card transactions with MasterCard and Maestro branded debit and consumer credit cards in the European Economic Area (EEA) violate EU Treaty rules on restrictive business practices. The Commission concluded that MasterCard's MIF inflated the cost of card acceptance by retailers without leading to proven efficiencies. MasterCard has six months to comply with the Commission's order to withdraw the fees. If MasterCard fails to comply, the Commission may impose daily penalty payments of 3.5% of its daily global turnover in the preceding business year. MIF are not illegal as such. However, a MIF in an open payment card scheme such as MasterCard's is only compatible with EU competition rules if it contributes to technical and economic progress and benefits consumers. It is said that in the EU only, over 23 billion payments, exceeding a value of €1350 billion, are made every year with payment cards [5], [6].

In response to the Decision, MasterCard decided to Lodge the Appeal Application before the General Court (formerly, Court of First Instance) and did it on 1st of March 2008. In the Appeal, MasterCard asked for the annulment of the Commission Decision, offering number of arguments. MasterCard has also decided to temporarily suspend the MIF accrual in order to comply with the Decision, but avoided to decrease the fees as EC requested, with the explanation that the MIF fees being applied are necessary to ensure the fair incentives to all parties in a four-party model [7].

The Decision made a lot of noise and as the outcome, six Banks (RBS, Lloyds, MBNA, Santander, HBOS, HSBC) have appealed to the Court of First Instance to intervene in support of MasterCard. On the other hand, Eurocommerce, the British Retail Consortium, and the British Government represented by OFT (Office for Fair Trading) applied to intervene in favour of Commission.

Followed by the number of oral hearings and meetings, MasterCard and EC have reached an interim arrangement to set up interim MIF rates to 30bps for credit and 20bps for debit cards, waiting for final Decision of the General Court that was expected to be reached during 2011.

MasterCard has appointed a monitoring Trustee to oversee compliance with the Commission requests, and also has asked clearly that all other similar payment system have to be treated in the same manner.

**European Commission's Statement of Objections (SO) of 3rd April 2009 against Visa**

Statement was issued after formal proceedings against Visa Europe were opened in March 2008. Statement of Objection concerns all multilateral interchange fees (MIF) set directly by Visa Europe in the EEA for POS transactions with consumer payment cards. These fees are said to apply to all cross-border transactions in EEA, as well as to domestic transactions in 9 EU member states.

Earlier on, Visa reduced its cross-border MIFs for debit card transactions to an average of 18 euro cents (down from 28 euro cents) and for credit card transactions to an average of 0.61% (down from 0.70%). Nevertheless, SO covers Visa's historic rates (i.e. those subject to exemption in the period 2002-2007).

On April 26 2010., the Commission issued a press release welcoming proposed commitments by Visa Europe to reduce its MIF for debit card payments applicable to all cross-border transactions and for domestic transactions in a number of countries to 0.2%.

Visa's current MIF for consumer credit and deferred debit card transactions remain outside the scope of this commitment decision and will be included in the on-going anti-trust investigation by the Commission covering Visa Europe's historic MIFs for consumer credit and deferred debit card transactions.

## 5. ACTIVITIES ON THE NATIONAL LEVEL

There were no direct regulatory interventions concerning card schemes IF in the USA. The issues were usually solved through private proceedings and occasional intervention of authorities through anti-monopole processes. First court case had been started in 1979. by National Bancard Corp. who had sued Visa that by applying its interchange fees illegal price agreements were put in place. The other famous case was initiated in 1998. by the US Department of Justice and in accordance with Sherman anti-monopoly law where Visa and MasterCard were blamed for preventing the issuers to issue other brands such as Discover or AmericanExpress (exclusivity issue). In 2005. and 2006. number of merchants initiated proceedings against Visa, MasterCard and some banks who issue cards stating that interchange fees introduced by them are too high and that they are product of illegal trust. The number of cases were consolidated in a single case named Wall-Mart case by the name of the largest participant. Since April 2009. US Congress works on law named „Credit Card Fair Fee Act" that will ensure competitive market based fees, as well as the conditions for merchant access to payment systems. Draft law allows merchants to collectively negotiate with banks with regards to costs that they have for card acceptance, and it should finally lead to consumer price reductions.

Australian Government had established Payment System Council within Australian central bank in 1998. with the objective of promoting competition, efficiency and stability in payment system. During the course of 2000. the Council had performed broad investigation of card schemes and their interchange fees in Australia, making a conclusion that existing interchange fees were much higher than it is justified if the costs are considered, and that those fees are not result of free competition. After the Study was made public, Australian central bank started broad payment system reforms, having a key element in significant interchange fee reduction.

Similar cases were opened in most of the EU countries: UK, France, Austria, Germany, Italy, Spain, Czech Republic, Slovakia, Hungary, Poland [8], Norway, Denmark, and Belgium.

Polish competition authority had found multilateral agreement on interchange fees being illegal and requested cancellation of IF.

Following EC statements, Austrian banks have agreed to reconsider and reduce IF in 2006.

In Spain 2005., the agreement has been reached between card schemes and merchants having Ministry of industry, tourism and trade as a mediator, to reduce interchange fees from 2,32% to 1,1% by 2008.

In Switzerland 2005., the agreement between competition authority and card issuers have been reached to reduce interchange fees from the average 1,65%-1,70% to 1,30%-1,35%.

General conclusions in the most of those proceedings were to postpone the decisions and wait for the European Commission and European General Court in Luxemburg final decisions.

## 6. STATUS AND PROBLEMS OF CARD BUSINESS DEVELOPMENT IN SERBIA

Serbian card market has scored sharp growth after 2004. Following the black period during the 90-ties, where international schemes were not operational in the country, the card market started to grow after introduction of Visa and MasterCard products in the period of 2000-2002, and especially after the introduction of domestic DinaCard scheme in 2004. Since then, Serbia has achieved the level of development of the regional peers [9], [10], [11]. Fig. 1 shows card number growth and major steps in Serbian card market development.

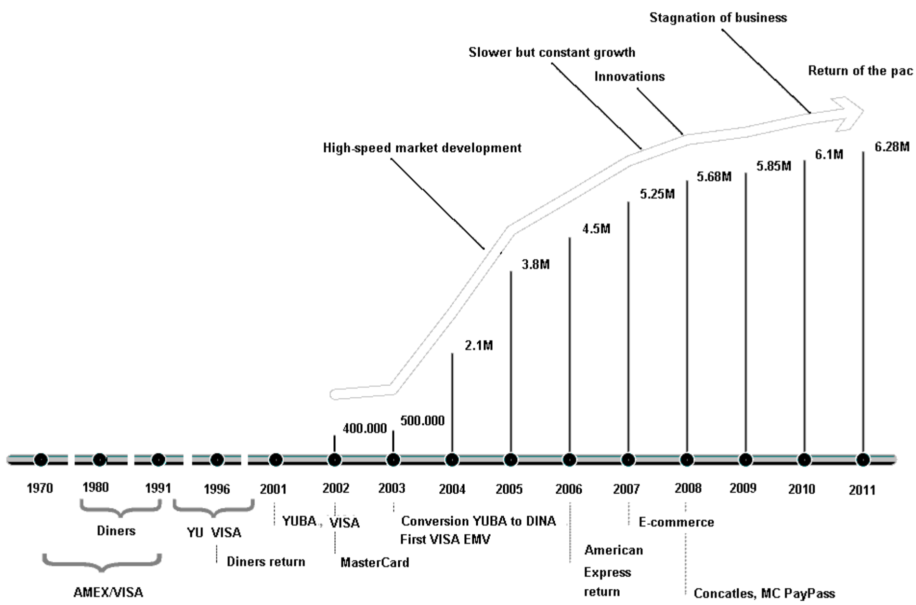


**Figure 1. Number of cards growth in Serbia**

Card product offering in Serbia is very wide both for corporate and individual clients. In April 2012. 32 banks are offering 205 different card products for citizens, and 31 products for corporate clients [11]. Tables 1, 2, 3 i 4 show card product offering and payment models for individual and corporate clients (data source: http://www.kamatica.com/platne-kartice).

**Table 1. Card Products for Individual clients in Serbia by type**

| | Number of Products | | |
|---|---|---|---|
| Year | Dec 2010 | Jun 2011 | Jun 2012 |
| »Debit cards | 88 | 87 | 105 |
| »Credit cards | 87 | 76 | 193 |
| »Charge cards | 9 | 7 | 4 |
| »Co-brand cards | 7 | 4 | 4 |
| Total | 191 | 174 | 216 |

**Table 2. Card Products for Individual clients by scheme**

| *Scheme* | | *Number of Products* | | |
|---|---|---|---|---|
| *Year* | | Dec 2010 | Jun 2011 | Jun 2012 |
| | Dina Card | 68 | 53 | 71 |
| | VISA | 54 | 56 | 57 |
| | VISA Electron | 29 | 28 | 34 |
| | Master Card | 23 | 22 | 32 |
| | Maestro | 11 | 11 | 15 |
| | Diners | 3 | 3 | 4 |
| | American Express | 3 | 3 | 2 |
| Total | | 191 | 176 | 216 |

**Table 3. Card products for corporate clients by type**

| | Number of Products | | |
|---|---|---|---|
| Year | Dec 2010 | Jun 2011 | Jun 2012 |
| »Debit cards | 29 | 27 | 18 |
| »Credit cards | 7 | 7 | 5 |
| »Charge cards | 11 | 11 | 5 |
| »Co-brand cards | 2 | 2 | 2 |
| Total | 49 | 47 | 30 |

American Express is offered by one bank and Diners Club is independent business entity. Visa cards are offered by almost all of the banks, while DinaCard is offered by 26 banks (2010), 23 banks (2011) and 28 banks in 2012. MasterCard is a little bit less present. The number of products has declined in 2011, but it boosted up again in 2012, showing that banks are trying to improve the offering and reinstitute the card as a payment instrument.

**Table 4. Card products for corporate clients by scheme**

| *Scheme* | | *Number of Products* | | |
|---|---|---|---|---|
| *Year* | | Dec 2010 | Jun 2011 | Apr 2012 |
| | VISA | 20 | 21 | 14 |
| | VISA Electron | 10 | 10 | 6 |
| | Dina Card | 10 | 7 | 5 |
| | Master Card | 7 | 7 | 3 |
| | Diners | 2 | 2 | 2 |
| Total | | 49 | 47 | 30 |

Basic characteristic of the last seven years of card market development in Serbia is that we had continuous growth of number of cards issued (with the rate that is lower than 5% in last 3 years), but the first quarter 2012. showed substantial decrease. Tables 5 and 6 show that the usage patterns have not been changed significantly over the years and that about 50% of the cards issued remain inactive. At the same time, the number of transactions per active card has been increased at the rate of 1.5%-5% per annum. Good sign is that the debit card activity is increasing, but in the case of credit cards situation is opposite.

**Table 5. Number of cards handed over to cardholders**

| Year | Handed over | | | | Percentage of active cards[2] | | | |
|---|---|---|---|---|---|---|---|---|
| 2005 | 89% | 10% | 1% | 3,858,302 | 33 | 78 | 83 | 35 |
| 2006 | 83% | 16% | 1% | 5,240,382 | 42 | 71 | 65 | 47 |
| 2007[1] | 81% | 18% | 1% | 5,725,465 | 38 | 73 | 59 | 44 |
| 2008 | 79% | 19% | 2% | 5,728,789 | 41 | 73 | 59 | 48 |
| 2009 | 81% | 18% | 1% | 6,014,390 | 41 | 69 | 56 | 46 |
| 2010 | 79% | 19% | 2% | 6,147,937 | 43 | 72 | 69 | 48 |
| 2011 | 81% | 17% | 2% | 6,350,587 | 45 | 65 | 68 | 48 |
| 2012[3] | 83% | 16% | 2% | 5.966.060 | 42 | 57 | 61 | 45 |
| | Debit | Credit | Business | Total | Debit | Credit | Business | Total |

[1]Active card is the card that recorded at least one transaction in the reporting period. Starting from Q2 2007 inactive cards number include cards that are used for the cash advances at the bank teller desks only. Also, as of Q2 2007 cancelled (lost, stolen,...) are excluded.

[2] Share of active cards in %

[3] 2012 data include Q1 only

**Table 6. Number of transactions per active card**

| Year | Number of transactions per active card | | | |
|---|---|---|---|---|
| 2005 | 20.97 | 22.07 | 29.30 | 21.17 |
| 2006 | 23.90 | 19.06 | 40.11 | 22.99 |
| 2007 | 33.78 | 17.91 | 46.96 | 29.44 |
| 2008 | 40.60 | 16.90 | 57.96 | 34.03 |
| 2009 | 43.66 | 17.64 | 62.28 | 37.03 |
| 2010 | 44.03 | 18.67 | 62.91 | 38.47 |
| 2011 | 47.57 | 20.33 | 69.02 | 42.25 |
| 2012[1] | 13,25 | 5,96 | 17,70 | 11,90 |
| 2012[2] | 52,98 | 23,85 | 70,79 | 47,58 |
| | Debit | credit | business | Total |

[1]2012 data include Q1 only

[2]2012 estimate based on Q1 data

Table 7 shows number of transactions per ATM device, as well as the average transaction amount in dinars. It could be notified that the first years after escalation of global financial crisis have caused minor drop in number of transaction, but in 2011 the number has returned to 2007 level. Average transaction amount scored constant growth but it is relatively low as compared to developed markets. Furthermore, if we take into consideration dinar depreciation, the average amount in euros even dropped.

Table 8 shows number of transactions per POS device, as well as the average transaction amount in dinars. It is clear that the debit card usage at the point of sale has been increased, but the average transaction amount dropped (in euro terms the drop was substantial). Tables 7 and 8 also show that Q1 2012 scored a drop as compared to Q4 2011.

Table 9 shows number of terminals (ATM and POS) in Serbia and total turnover in millions of dinars. It is evident that number of ATMs has been reduced slightly in last two years, while in 2009 and 2010 there were minor expansion. Fastest expansion of ATM networks was recorded in the first years of cards introduction, especially from 2005, until 2008. Number of merchant locations was growing very fast until 2007. Growth trend continued until first quarter 2009. when maximum of 60,857 POS terminals was reached. But later in 2009. and 2010. number of installed POS devices declined sharply (lot of shops were closed). First three quarters 2011. the number remained at the level of 2010., finally in the last quarter there were slight increase from 57,796 to 58,012 devices.

**Table 7. Number of transactions and average transaction amount on ATMs**

| Year | Number of transactions per ATM | | | | Average amount |
|---|---|---|---|---|---|
| 2005 | 16,876 | 920 | 144 | 17,939 | 3691 |
| 2006 | 19,118 | 2541 | 207 | 21,867 | 4083 |
| 2007 | 17,178 | 2,101 | 194 | 19,473 | 4418 |
| 2008 | 16,131 | 1,829 | 206 | 18,165 | 4824 |
| 2009 | 15,389 | 1,500 | 214 | 17,103 | 5289 |
| 2010 | 16,158 | 1,216 | 255 | 17,629 | 5802 |
| 2011 | 17,901 | 1,062 | 324 | 19,287 | 6249 |
| 2011[1] | 4.738 | 260 | 92 | 5.091 | 6525 |
| 2012[1] | 4.430 | 275 | 82 | 4.787 | 6444 |
| 2012[2] | 17.720 | 1.101 | 326 | 19.147 | 6444 |
| | Debit | credit | business | Total | Total |

[1]2011 data refers to Q4 and 2012 data refers to Q1

[2]Estimate of 2012 transaction number based on Q1 data

**Table 8. Number of transactions and average transaction amount per POS**

| Year | Number of transactions per POS | | | | Average amount |
|---|---|---|---|---|---|
| 2005 | 355 | 79 | 24 | 458 | 2,223 |
| 2006 | 421 | 165 | 24 | 610 | 2,189 |
| 2007 | 520 | 162 | 29 | 711 | 2,159 |
| 2008 | 661 | 157 | 43 | 862 | 2,107 |
| 2009 | 722 | 149 | 48 | 919 | 2,011 |
| 2010 | 824 | 157 | 57 | 1,038 | 2,030 |
| 2011 | 975 | 169 | 68 | 1,212 | 1,995 |
| 2011[1] | 262 | 44 | 19 | 324 | 2,070 |
| 2012[1] | 245 | 39 | 15 | 299 | 1,974 |
| 2012[2] | 981 | 158 | 60 | 1,198 | 1,974 |
| | Debit | credit | business | Total | Total |

[1] 2011 data refers to Q4 and 2012 data refers to Q1

[2] Estimate base on Q1 data 2012

When we analyze card turnover, it is clear that cards are used mainly for cash withdrawals at the ATM machines, and this figure is two-fold as compared to purchase transaction volumes. In theory, card usage should have decreased share of cash payments in overall payment structure. But in Serbia, as well as in the number of transition economies, usage of debit cards in fact increased cash requirements [12].

**Table 9. Number of terminals and total turnover in Serbia**

| | Number of terminals and total turnover | | | |
|---|---|---|---|---|
| Year | ATM | volume | POS | volume |
| 2005 | 837 | 51.9 | 31,816 | 31.9 |
| 2006 | 1,348 | 109.0 | 46,192 | 65.0 |
| 2007 | 2,074 | 165.5 | 55,340 | 91.3 |
| 2008 | 2,494 | 224.5 | 57,919 | 117.1 |
| 2009 | 2,723 | 263.8 | 59,058[1] | 124.8 |
| 2010 | 2,857 | 312.7 | 57,459 | 141.6 |
| 2011 | 2,830 | 372.5 | 58,012[2] | 161.5 |
| 2011[3] | 2,830 | 101.0 | 58,012 | 44.4 |
| 2012[3] | 2,808 | 92.8 | 60,991 | 40.9 |
| 2012[4] | 2,808 | 371.3 | 60,991 | 163.8 |

[1] At Q1 2007 there were 60,857 POS terminals

[2] At Q3 2007 there were 57,796 POS terminals

[3] 2011 data refers to Q4 and 2012 refers to Q1

[4] 2012 estimate based on Q1

It is clear that after 2008 market development and growth had been slowed down due to number of reasons, world economic crisis, strict macroeconomic policy of Serbian Central Bank and regulatory limitations in consumer lending, but there was one more powerful factor playing significant role - domestic multilateral interchange.

Multilateral interchange fees for domestic transactions were set up fairly high by the international card schemes in the early years of market development. In order to make their products more attractive and to provide sufficient motivation for the card issuing banks, MasterCard and Visa have installed the fees at the level that is much above the other EU markets. Those fees vary from 1.0-1.5% of the transaction value, with the exception of petrol and utilities were they were set at about 0.4% level. Having the

MIFs so high, merchant commissions started sky high as well, in average at the levels ranging from 3-4% of the transaction value, and it created heavy burden for the merchants and certainly made the pressure over consumer prices.

The rationale for setting up the fees that high was in the position that markets in the early stages of development require high MIFs to fuel the market growth. In fact, international schemes used MIFs as a tool to make their products more competitive, and although the general aim of the schemes was competitiveness, it has been accomplished in the semi-regulatory manner since the fees were ‘prescribed’ by the ICSs and other market participants (merchants at the first place) were not involved. In addition, ICSs had also put in place some market limitations, most importantly – the limited number of acquiring banks.

The merchants who accept cards should benefit from increased turnover of goods and services as well as from the reduction of costs in cash handling. However, certain analysis in many countries (including Serbia) have shown that card acceptance in fact increase the costs for merchants and the costs are not generally justified by the increase in turnover. Among other things, merchants complain that their inability to reject popular cards and offer discounts when payment is made in cash, leads to higher consumer prices, but also that their negotiating power in the area of card acceptance costs is heavily limited.

In many countries, including Serbia, merchants are transferring card acceptance costs to consumers. In that sense, all the consumers, including those who are not using cards, are paying higher retail prices at the merchant stores who accept cards.

High MIF in Serbia lead to high costs for card acceptance in merchant stores. By the means of cost transferring to consumers, the retail prices are finally inflated, and all of that has a negative impact on domestic economy but on a card development and higher usage of cards as well.

Serbian central bank NBS has played major role in facilitating fast growth of card market by introduction of domestic DinaCard scheme with significantly lower MIF interchange fees (merchant commission had been setup in the area of 1-2%, and issuer fee (MIF) at 30% of merchant commission).

However, regulated fees were not applied to international schemes. Under such circumstances, DinaCard was much better accepted by merchants because of lower fees, and as a consequence - a number of banks entered card acquiring arena.

At first, it appeared to work well, market growth was triggered, but soon - new acquiring entrants accepting Dina cards only, found themselves non-profitable. Being in position to accept Dina cards solely, those banks haven’t been able to achieve the break-even volumes and to recover the investments. Service quality was first to pay the price, and stagnation was inevitable.

Inspite of the principle that central banks must not interfere the market competition and create unfair competition to other financial market participants, at the moment when NBS had noticed that the number of banks who are issung Dina cards started to decrease because of higher profitability of MasterCard and Visa cards for banks (higher interchange means higher profit for banks), NBS decided to increase DinaCard MIF multilateral fees to 0.8% in average (from earlier 0.3-0.6%), with the objective to make DinaCard cards more attractive for issuing banks. The move has fundamentally killed the interest of the few significant acquirers to develop the DinaCard acceptance further.

At the very same time, by keeping the Merchant Service Charges (merchant commissions) at high levels, Visa and MasterCard encountered the same problem – the acceptance growth was stopped. Basically, there are 2 reasons:

- small merchants and those with the low margin businesses were not able to afford such a high service charge
- service charge, in fact, had been reduced for a larger merchants, leaving very thin (and non-profitable) margins for the potential new acquirers

In such a way, both domestic and international schemes faced stagnation and decline, although from a very different reasons, ICSs by limiting competition, and central bank by trying to compete in the market.

Strange enough, neither central bank nor international schemes haven't realized that in case of Serbia stagnation comes from a practices that were abandoned all over Europe many years ago:

- central banks do not interfere in market competition
- ICSs do not set up market barriers

It is hard to expect that ICSs in Serbia could cease the old practices, at least not unless being forced to, so it would be highly recommended that Serbian authorities and institutions take a course of the European peers and push the MasterCard and Visa to decrease domestic interchange fees (a rough estimate could range from 30 to 50 basis points). It would be completely coherent with European accession process.

The measure taken either by the central bank or the Competition Authority will certainly lead to decrease in merchant service charge, relieving pressures over consumer prices. It will lead to increased interest in card acceptance by merchants and most probably to new investment cycle by new acquiring banks as well. There is no reason to fear that decrease in domestic interchange could reduce the card issuing since in Serbian case the issuer revenues are coming from the interest being charged over outstanding revolving balances (20 to 25% per annum) and card issuing and maintenance fees. The interchange revenues make less than 10% of total issuer revenues, and they are certainly not the main factor that drives the card issuance, moreover, we could say that most of the issuing banks in Serbia are not aware of the interchange incomes at all.

## 7. CARD TRANSACTIONS PROCESSING IN SERBIA

Special attention shall be directed to the process of calculating interbank net positions for payment card transactions for international card brands (MasterCard and Visa) and to their processing. For the transactions executed in Serbia, calculation of interbank net positions is performed in Visa and MasterCard processing centers abroad. Serbia itself is one of the very few countries that do not have nationwide processing centre with exception of DinaCard center. Switching and clearing centre for DinaCard is a part of National Bank of Serbia. The fact shows that both competencies and facilities exist for similar solution that could be applied on international cards. Nationwide centres exist in Hungary, Turkey, Slovenia but in some less developed countries in the region like Bulgaria and Bosnia and Herzegovina for example.

Republic of Serbia use Visa International NNSS - National Net Settlement Service. Calculation of interbank net position in dinars for domestic Visa transactions in Serbia is performed by Visa International abroad, and the transactions are settled through in RTGS system of the Serbian central bank.

Calculation of net positions for domestic MasterCard transactions in dinars is performed by MasterCard abroad, and again, transactions are settled locally through Serbian RTGS system.

As we have seen, settlement of interbank net positions in Serbia is performed through central bank's RTGS system which fulfils one of the basic principles – settlement is performed using central bank's money. However, clearing of transactions is performed outside of the country both for Visa and MasterCard cards, in spite of the fact that it could be easily arranged through existing DinaCard centre similar to solutions in other countries. The solution could ensure decrease in clearing costs for banks, and it is to be expected that both banks and real sector could benefit from it. At the very same time, clearing institution (National payment card Centre in NBS) could make some revenues.

Payment transactions made by Visa cards are processed through VisaNet telecommunication network that interconnects Visa members with one of Visa centres.

Card payments in MasterCard system are processed through BankNet telecommunication network which, like in Visa case, interconnects MasterCard member banks and facilitates transaction routing and authorization.

International transactions are settled through settlement banks selected by Visa and MasterCard.

There are some differences in practices of countries who have established national clearing centres, in spite of the fact that clearing services for domestic transactions are offered by Visa and MasterCard in their cases as well. However, settlement of transactions in local currencies is generally performed through domestic RTGS systems.

Bulgaria and Turkey have single centralized clearing centre for domestic transactions, while in Poland and Bosnia and Herzegovina banks have the option to use either domestic system or to clear the transactions using Visa – NNSS or MasterCard system. In Slovenia, at the times before euro introduction when domestic currency named tolar was used, so called ''The Slovenian National Net Settlement Service" existed, and interbank net positions for domestic Visa transactions were calculated there. At first, settlement agent used to be Abanka Vipa d.d., and later on, settlement service has been moved to Slovenian central bank.

Centres of this kind could be organized in a different ways and variety of solutions exist across Europe and worldwide. Centres might be private entities or founded by national public institutions. Switching and clearing centres could be either profit or non-profit organizations. In France for example, clearing centre is non-profit organization under the umbrella of 11 largest banks that are financing centre operation. In Britain, the centre is profit organization.

First attempt to establish national switching (and clearing) centre was made in 1998. by Serbian Bank Association, but it had been abandoned. Although the decision to establish centre was finally made at the end of May 2004. by Bank Association and 13 smaller member banks, almost nothing has been done [10].

Within the course of last few years, most of the domestic banks have intensified the activities of setting up and/or restructuring of their infrastructures in order to be able to issue and accept cards, set up ATM and POS networks and join international card organizations. Being aware that it is not realistic to force the market to use their proprietary brands, banks have joined the card organizations which created a need for interconnections and switching centre establishment [10], [11], [12], thus it is evident how important it is to involve all the relevant stakeholders in order to ensure open, safe and reliable system to foster further growth.

Having in place a number of new payment instruments, risk management and fraud protection evolve to be the topics of highest importance. The systems to be put in place have to be open and facilitate continual adaptation to technology development and market changes.

To be successful, interbank network have to facilitate switching of domestic transactions and to ensure:

- promotion of card usage in Serbia and card business development
- acceptance of internationally branded cards for purchases and cash withdrawals in country
- creation of common infrastructure and avoid multiplication of investments and costs.

By setting up common infrastructure, interbank network shall be capable to facilitate authorization and switching functions in 365/7/24 mode, and provide permanent on line connections to international networks. In addition, domestic card centre should facilitate clearing of domestic transactions, and optionally functions like: ATM and POS device management, card personalization and processing services for smaller banks.

We could say that the existence of single common entity covering mentioned functions will simplify and make in-country card operations more cost effective.

## 8. CONCLUSION

Multilateral interchange fees for domestic transactions were set up fairly high by the international card schemes in the early years of market development. In order to make their products more attractive and to provide sufficient motivation for the card issuing banks, MasterCard and Visa have installed the fees at the level that is much above the other EU markets. Those fees vary from 1.0-1.5% of the transaction value, with the exception of petrol and utilities were they were set at about 0.4% level. Having the MIFs so high, merchant commissions started sky high as well, in average at the levels ranging from 3-4% of the transaction value, and it created heavy burden for the merchants and certainly made the pressure over consumer prices.

Fundamental to any vision or strategy of the EU for a SEPA must be the principle that competition not price regulation will create an effective and efficient marketplace. The same goes for Serbia, especially in the light of EU accession. The current focus of EU regulators trying to regulate the credit card MIF might therefore reasonably look misguided in EU context, still in case of Serbia, the institutional response over ICSs behaviour of setting up the barriers and reducing competition is certainly needed.

If a SEPA is the ultimate objective of the EU and Serbia, then the EU and Serbia should strive to remove barriers to entry in the markets, promote transparency, pursue a strategy of widespread acceptance of all debit and credit cards at merchant outlets and encourage competition among card schemes, banks and processors to the benefit of all participants.

In addition to high MIF fees, one of the main characteristics of Serbian card market is non-existence of single common nationwide switching and clearing centre for international card schemes. Each and every bank that issue and accept cards (with the exception of DinaCard cards) has its own processing services provider, sometimes even few providers. Most of the service providers are foreign companies. It clearly points to increased costs of services and telecommunications. It is for the sake of that reason undoubtedly shown that the existence of common nationwide switching centre will be economically justified, it will provide benefits to all market participants and Serbian economy overall, and finally it will facilitate further growth of card business in country. Having in mind the fact that DinaCard centre in Serbian central bank basically provides most of the necessary functions, it is clear that competences needed for realization of such an entity exist.

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To cite article, use the following format: Obradović, S., D. Tešić: Multilateral Interchange Fees in Serbia and their impact on card payment systems development, Industrija, Vol. 40, No. 3, pp 33-55