



RESEARCH ARTICLE

Electronic Business Operations on the Banking Market in Serbia and Countries in the Region

Mirjana Knežević¹, Aleksandar Lukić^{2*}

¹University of Kragujevac, Faculty of Economics, Djure Pucara Starog, Kragujevac, Serbia.

²Credy Bank AD, Kralja Petra, Kragujevac, Serbia.

*Corresponding Author: E-mail: acalukic@eunet.rs

Abstract

Electronic banking represents means of different ways of executing financial transactions using the informational technology. Today, the condition for staying on the market and successful business is its application. The subject of this work is the analysis of electronic banking in Serbia and the neighboring countries, their legal regulations and applications in the banking system. The goal of the survey is to imply the importance of the electronic banking in Serbia, Croatia and Bosnia and Herzegovina, the degree of their development and the necessity for growing presence in the contemporary banking business. Together with parallel legal view, this work implies conditions that are necessary for the development of the electronic banking on the banking market through the improvement of the informational communicational infrastructure, re-engineering of the business processes and continuous education. In this work, the quality and quantitative method have been applied, based on the usage of descriptive and statistical analysis.

Keywords: *Banking system, Electronic banking, Electronic business, Electronic payment.*

Introduction

Contemporary banking business range over great number of new banking products and services from the area of electronic banking that are offered to clients. Electronic banking implies managing of banking transactions through telecommunication network and, in modern banking; it is mostly used as an expression for the service that banks offer to their clients in terms of executing transactions from the personal account via Internet. With application of electronic banking to different sectors of the national economy, the coherence and mutual dependence between computer networks of private and public organizations involved in domestic and international economic activities grows as well. In this way, national economy moves from the phase of interactive action of autonomous subjects to the phase of integrated system for the manipulation of informational stream in the economics. In the era of global development of world economy, the application of electronic banking provides reduction of costs, greater competence on the market and greater efficiency of the business.

Electronic Banking in Serbia and in the Countries in the Region

Banking system in Serbia in the past period implies dependency and conditionality of its

development with sociopolitical situation and economic changes in the country. The period of transition of banking sector in Serbia begun in 1992, but the most significant changes have been occurring after 2000 when the conditions were met for the arrival of foreign investors and the beginning of transformations of entire banking system. The changes in the property relations and the arrival of foreign investors had lead to decreasing in the overall number of banks and share of the foreign capital in the ownership of banks and in total capital.

The transformation of the banks in Serbia in this period implied changes in the way of organizing, managing finances, human resources and tracking of the modern technologies with goal of increasing the efficiency of business, creating quality banking product, increasing the level of services and accomplishing bigger profits. One of the important conditions for developing quality banking products and for satisfying the needs, demands and wishes of contemporary consumers of banking services were abandoning the traditional banking concept and accelerated development of the electronic banking. The first significant attempts of development of the banking system in Serbia occur in 2001 when the

Table 1: The Structure of property capital of banks in Serbia: [1]

| | Element | 31.12.2005 | 31.12.2006. | 31.12.2010 | 31.12.2011 |
|---|--------------------------------|-------------------|--------------------|-------------------|-------------------|
| 1 | Total number of banks | 40 | 37 | 34 | 33 |
| | Majority foreign capital | | | | |
| 2 | Number of banks | 17 | 22 | 21 | 21 |
| | Participation in total capital | 49% | 67% | 72% | 73% |
| | Majority foreign capital | | | | |
| 3 | Number of banks | 23 | 15 | 13 | 12 |
| | Share of total capital | 51% | 33% | 28% | 27% |

Pexim Company offered the first services of electronic banking. Until 2003 in Serbia, the largest part of payment operations was accomplished through specialized institution, Office for public accounting, or Department for accounting and payment, and from the beginning of 2003 payment operations were completely transferred to banks, which had significant influence to the credit potential of banks and their business. [1]. The cancellation of monopoly system in payment operations was the most significant essential change in the payment operations. The basic institutional assumption for the realization of these changes has been created by adopting a Law on payment operations in which it was required to transfer payment operations from the Department for Accounting and Payment to the banks, and to assign the conditions for the technical fitness of banks for the execution of those works, using the electronic payment order and the new system of interbank accounting [2]. A number of banks, with transferring payment operations to commercial banks as a part of their offer, offered electronic services as well, designed for legal entities and physical persons, in form of basic packages of services which would be improved in time and more developed. In the beginning, the basic package offer was for legal entities, related to executing electronic payment operations in the country, and later in the banks' offer there were applicative solutions for physical persons and operations with abroad. The banks successfully engaged into new interbank accounting systems and payment operations business, providing higher level and quality of services. In this period, informational-technical structure was significantly improved and selection of electronic banking offers was extended. By means of home computer or mobile phones, banks offer to their clients: access to account balance, preview of turnover, preview of account changes statement, receiving and sending personal messages, payment of liabilities through payment orders with current dates and advance dates. There are also possibilities of using services of payment operations through ATMs, debit cards and mobile phones. Up to 2003, there were issued less than 400 thousand debit cards in Serbia, and already in 2005, the number of cards in circulation reached 3,8 million, according to data Aleksandar Lukić *et. al.* | July.-Aug. 2012 | Vol.1 | Issue 4|102- 107

of the National Bank of Serbia . The number of ATMs in Serbia and their turnover were significantly increased as well. During the last years the development of electronic banking in Serbia has been continued so that it is relatively well developed today, with tendencies of further intensive development by types of products and technological level of possibility of its usage. The tendencies go to the fact that in the future all subjects would be electronically connected and that banks would expand range of services they provide electronically, with optimal dynamic of changes. At this moment, applicative solutions related to electronic operations of legal entities of physical persons have the activities exclusively in the domain of payment operations, in which clients are provided with variety of payment options in the country, for legal entities abroad as well, and are given possibilities for settling liabilities, i.e. paying bills for physical persons. The development of corporate electronic banking and the banking designed for physical persons, that follows and that is already applied in developed countries, is the addition to the basic package of services that are offered today in Serbia. That package of services inclines, through accompanying services, to complete closure of business process and provides substitute for documentary control with electronic documents that are digitally signed, and like such, completely valid. Similar to the situation in Serbia, electronic banking in the countries in the region is insufficiently developed, but in the last years, it has been in intensive development. According to data from National Bank of Croatia, in 2011. in Croatia there were processed total of 194,802,497 electronic orders in total value of 1,185,821,078.9 thousand of kuna. At that, the largest participation in the total volume and value of non-cash payment transactions have the orders realized via Internet and POS terminals [3].

Electronic banking, as a new form of banking operations, in Bosnia and Herzegovina has been developing fast in the recent years. In 2010. there were 19,257 business subjects and 48,545 physical persons, users of electronic banking. According to the data of the Central Bank, in BiH the number of citizens that in 2011 used the services of e-banking was 70,474 and increased for 21,929

Table 2: Overview of ATMs and transactions charged on them in period 2005- 2008 [1]

| | Number of ATMs | Number of transactions | Turnover of transactions (in millions of RSD) |
|-------|----------------|------------------------|--|
| 2005. | 837 | 13.124.920 | 5.711 |
| 2006. | 1348 | 25.307.116 | 9.750 |
| 2007. | 2074 | 35.003.741 | 13.155 |
| 2008. | 2494 | 44.917.646 | 17.345 |

users compared to the previous year, while the services of Internet banking in the past year comprehended 23,865 corporations, organizations and enterprises, which was, compared to 2010., growth for 4,608 users [4].

Legal Frame of the Electronic Business Operations

Advanced development of the electronic operations lead to the need for adjusting to the new informational and technological trends and developing legal foundation for creating long-term plan for that field. In Serbia, the field of electronic operations is legally regulated by enacting Law on electronic signature, Law on electronic commerce and Law on electronic document [5]. With enacting the Law on electronic signature, the new process of creating the legal frame, that is necessary for establishing, functioning and development of the informational society has begun. According to this Law, electronic signature is a collection of data in electronic format which are associated or logically related with electronic document, and that are used for identifying the signer. It represents the technology whose application in the electronic business system provides authentication of the signer, protection of the integrity of transferred data and irrevocability of electronic signature of the given message or document. Digital electronic signature has three functions: it reliably identifies the identity of the signer; it prevents the breach of the integrity of electronic document and provides additional denial of responsibility for the content of the document. The law brings in the term of qualified electronic signature, which compared to data in electronic format, has the same legal action and force of evidence as in paper form [6]. In order to be equivalent to handwritten signature, qualified electronic signature must satisfy terms regulated by law related to the way of forming qualified electronic signature at certification body and terms for executing the activity of certification and record keeping. With registering certification bodies for the issuing of the electronic signatures, the use of qualified electronic signatures for signing the electronic documents is enabled, thus meeting the condition for validity and force of evidence of the qualified electronic signature in the legal matters. With the

full implementation of this Law, the conditions for the application of the electronic signature and exchange of electronic documents are met, with the confidence of the vast public in the application of the electronic signature, which creates the space for the more intense development of the electronic operations system. The Law on electronic commerce has been enacted with a goal to create conditions for functioning of the electronic commerce system in imitation of solutions of more developed countries. With this Law, for the first time in Serbia, the possibility of concluding and implementing legal operation exclusively in the electronic mode in the goods and service commerce has been introduced, that is, the legal foundation for the conclusion of the contract in electronic format has been created. The most important legal institute in the Law are the contracts in electronic format. The Law explicitly determines that contract can be concluded electronically and that contract cannot be disputed in validity just because it was created in the electronic format. Like for all the contracts, for the contracts made in electronic form, all the regulation that regulate obligational relations apply, unless it was regulated by Law in a different way. Electronic form of the contract does not apply to legal operations concerning property, property relations between spouses, disposal of assets of the persons with inability to act, gift agreement and other legal operations where the usage or signing of the autograph in documents in paper was determined with specific law or regulation. When the signature is the condition for the validity and concluding the contract, it is considered that the electronic message signed with qualified electronic signature fulfills it. With the Law on electronic commerce, some common rules of contracting were set in a new way. The provider of the contract, as the provider of services, is obliged to provide to other party, in a clear, understandable and unambiguous way the data and notifications about the procedure that applies with the conclusion of the contract, contract clause, basic conditions for the operation if they are part of the contract, and codex of behavior by which the other party is due to perform and how they could be viewed in electronic way. The provider of the contract is obliged to provide to the other party technical

Table 3: Volume of non-cash payment transactions in Croatia in 2011 [3]

| | Citizens | Share | Business subjects | Share | Total | Share |
|-------------------------|-------------|---------|-------------------|---------|-------------|---------|
| Electronic orders-total | 122.465.354 | 100,00% | 72.337.143 | 100,00% | 194.802.497 | 100,00% |
| Internet | 33.437.881 | 27,30% | 49.484.248 | 68,41% | 82.922.129 | 42,57% |
| Telebanking | 0 | 0,00% | 4.298.796 | 5,94% | 4.298.796 | 2,21% |
| Mobile phone | 433.453 | 0,35% | 58.472 | 0,08% | 491.925 | 0,25% |
| Land Line | 256.220 | 0,21% | 131.540 | 0,18% | 387.760 | 0,20% |
| POS terminals | 86.227.739 | 70,41% | 3.741.323 | 5,17% | 89.969.062 | 46,18% |
| Other | 2.110.061 | 1,72% | 14.622.764 | 20,21% | 16.732.825 | 8,59% |

Table 4: Value of non-cash payment transactions in Croatia in thousands of kuna in 2011 [3]

| | Citizens | Share | Business subjects | Share | Total | Share |
|-------------------------|--------------|---------|-------------------|---------|-----------------|---------|
| Electronic orders-total | 45.490.798,7 | 100,00% | 1.140.330.280,2 | 100,00% | 1.185.821.078,9 | 100,00% |
| Internet | 28.512.228,1 | 62,68% | 732.346.821,5 | 64,22% | 760.859.049,6 | 64,16% |
| Telebanking | 0 | 0,00% | 67.564.018,2 | 5,92% | 67.564.018,2 | 5,70% |
| Mobile Phone | 458.932,9 | 1,01% | 117.967,6 | 0,01% | 576.900,5 | 0,05% |
| Land Line | 149.154,4 | 0,33% | 470.765,2 | 0,04% | 619.919,6 | 0,05% |
| POS Terminals | 16.254.409,3 | 35,73% | 1.937.709,7 | 0,17% | 18.192.119,0 | 1,53% |
| Other | 116.074,1 | 0,26% | 337.892.998,0 | 29,63% | 338.009.072,1 | 28,50% |

means for recognition and correction of the wrong data entry into the message before its submission or sending, before the concluding of the contract. These rules do not apply for the contracts concluded with electronic mail or other form of personal electronically communication. The availability of the contract imputes the provider of the contract, that is provider of the services, which is obliged to provide to the other party availability of the text of the agreement and common terms of operations that are part of the agreement in the electronic form in a way that provides their storage, usage and reproduction. Confirmation of delivery as well obliges the provider of the contract, i.e. provider of services, which is bound to, without delay and with a special electronic message, confirm the delivery of the electronic message that contains offer or acceptance of the offer for the conclusion of the agreement. For the time of the conclusion of the contract in the electronic form, it is considered the moment when the provider receives electronic message that contains statement of the person who offered that he/she accepts the offer. The offer and its acceptance, as well as the other statement done electronically, are considered as received when the person to whom there are intended to can access them [7]. With enacting the Law on electronic commerce, the legal grounds for the indentation of the electronic and classic forms of operations were created, as well as the terms for their further development. According to the Law on electronic document, electronic document represents set of data comprised of letters, numbers, symbols, graphic, audio and video

records contained in the pleading, statement, decision, document or any other act made by legal entities and physical persons or authorities for usage in the legal turnover or in the administrative, judicial or any other procedure before authorities, if it is electronically, digitalized, received, saved or archived on the electronic, magnetic, optical or other media [8]. Likewise contracts in the electronic form, validity or force of evidence of electronic document cannot be disputed just because it was made in electronic format. Electronic document is created by applying available informational-ommunicational technology. It cannot have its copy in the electronic form, but its copy is created on paper with signing of the printed copy of its external form, i.e. screen view, in which it must be indicated that it is a copy of electronic document. Signed copy of electronic document has the force of evidence of the original [9]. Like in Serbia, electronic banking in Bosnia and Herzegovina is regulated by specific legal acts which were coordinated with the Law and directives of Europe Union about electronic signature and privacy in electronic communications [10]. In Croatia, in the field of electronic commerce, there were passed: the Law on electronic signature, Law on electronic commerce, Law on electronic certificate, Law on informational safety, while in Bosnia and Herzegovina the electronic commerce is regulated by Law on electronic signature and Law on electronic legal and business operations [11]. With passing these laws, in Serbia and in the countries in the region, the legal ground for further development of all

services of electronic operations has been created. In the following period it is necessary to pass regulations from the area of informational safety that will additionally regulate standards of informational safety, field of informational safety, and authorities and assignments of certain institutions in this field.

Electronic Banking on the Example of Banca Intesa

Banca Intesa is one of the first private banks in Serbia. From 2005 it operates as a part of Banca Intesa Group, which today has the name of Intesa Sanpaolo, the most powerful Italian bank group. By the amount of total active capital, total placement, deposits and incomes, Banca Intesa in at the first place in Serbia with over 1,5 million of clients. Variety of offers of Banca Intesa include services of electronic banking for legal entities and physical persons. When it comes to electronic banking for physical persons, the bank has in its offer multiple types of solutions, and the client decides for the one that best suits his needs. The service of electronic business is activated with the concluding of the contractual relation with the bank, with signing the contract which regulates rights and obligations of both sides, the type of service that will be used, authorized persons and authorization over accounts. E-banking system of Banca Intesa offer to its clients following services: Intesa Mobi, Intesa On-line, Intesa Halo, SMS permanent order and E-Mail notifications. Intesa Mobi is a service that provides to its clients to perform via mobile phone financial transactions with complete safety. The service is available 24 hours, 7 days in a week. This service provides paying of monthly and other bills, checking the current balance and traffic on accounts and credit cards, checking the currency list, performing exchange operations, checking the date of the expiration of the allowed limit of overdraft on the current account and the overview of floating checks. Activation of the service is free, and the application is protected from copying and executing on other phones except on the phone on which the activation has been made. Intesa On-Line is the service of electronic banking that provides paying of monthly bills, performing exchange transactions, overview of traffic and available balance on the current account and credit cards. Application is accessed directly from the bank's website and all data exchanges through Internet with the bank are encrypted and protected. Intesa Halo is a service that provides its users the possibility to find out the balance on their accounts and payment cards, amount of reserved funds, description of all products of the Bank, currency list and all other important information with the assistance of voice machine.

Phone banking implies execution of transactions via phone call to agent of Call Center of the Bank, with prior identification on the voice machine by entering the number of the account and personal identification number. In this way, it is provided to pay monthly bills, exchange currency, paying off liabilities on the credit cards, transfer funds to other accounts and overview of the balance on the accounts and payment cards. Beside above mentioned, Banca Intesa offers to its customers the possibilities of checking the balance by sending SMS notification and sending monthly credit cards settlement to E-Mail addresses of the users. In this way, monthly settlements can be archived and saved in electronic format which provides more efficient tracking of the spending and better control of the available funds. Electronic operations of Banca Intesa for legal entities have following project solutions for their use: E-banking, Service Center and HAL E-bank, and the user can choose one or more solutions. E-banking is a project solution that provides simple overview of the account balance, downloading settlement and safe dinaric and foreign exchange payment operations with the usage of FX application and WEB application. FX application is an off-line application that has its own local data base. All orders can be created in the off-line mode, and they would be saved in the local data base of the application. After that, it is enough just to perform synchronization, which has to be in on-line mode, and the orders go to Bank and are being carried out, and the users download settlement and data on daily changes on the account that are places in the local data base as well, and can be further used. Web application is an on-line application that implies that user is downloading settlements, creating orders, printing documents and executing payments all the time through his provider while connected to bank's website. Service center is a project solution which is offered as a service to users that already use FX application with another bank. For all users that have account opened in Banca Intesa, and use the services of the Service center, it is provided to use the same channel, card and application for the electronic operations with the account Banca Intesa Belgrade. HAL E-bank is a user application intended for the operation of small enterprises, as well as the large business systems. The user has the possibility to, based on the software installed, without leaving the enterprise, perform the payment operations simply, quickly and efficiently. For the users who already use the application with another bank, application gives the possibility to operate with one application and one card with all banks where they have opened accounts and they wish to work electronically [12].

Conclusion

Electronic banking represents the most advanced form of organization of banking business, to which all economic subjects oriented to active conquering of better market positions and intensive investment in the works of development strive. The philosophy of modern banking is based on total locational and functional approximation to the users through self-service banking systems. With the development and globalization of telecommunication, systems of electronic banking gained absolute primacy in the world, given that they provide to users of financial services to communicate with their bank and use bank services from home or their work place via phone or personal computer. In keeping with trends in developed countries, in Serbia and countries from the region, the awareness of the necessity and the vast usage of electronic operations has been developing. For this business system to successfully develop, it is necessary to provide appropriate level of technical qualification in banks, enterprises and public institutions, and to reach necessary legal solutions that will regulate

this field. Apart from that, further development of electronic banking will significantly depend on elimination of risks associated with it, above all on securing confidence of transactions and protecting privacy of the customers, which should be accomplished with higher standardization of business and application of new sophisticated technological solutions. From the parallel overview of the electronic banking in Serbia and countries from the region, we can conclude that the banks in those countries should put more attention in their offer in the development of electronic banking network, above all, in mobile banking, because the number of mobile phones users is significantly larger compared to the number of computer users. More significant measures should be taken in the field of introducing users to the options of electronic banking and overcoming the prejudices and negative opinion about these services. By accomplishing these goals, electronic banking market will encounter with propagation, and it will be successfully involved in the modern world trends.

References

1. www.nbs.rs
2. Law on payment operations, Official Gazette SRJ, No. 3/2002
3. www.hnb.hr
4. www.cbbh.ba
5. Law on electronic document, Official Gazette RS, No. 51/2009.
6. Law on electronic signature, Official Gazette RS, No. 135/2004.
7. Law on electronic commerce, Official Gazette RS, No. 41/2009.
8. Law on payment operations, Official Gazette SRJ, No. 3/2002.
9. www.naled-serbia.org.
10. Directive 1999/93/EC on a Community Framework for Electronic Signatures“, Official Journal of the European Communities, L13/12-20, 19.01.2000.
11. Law on electronic signature, Official Gazette No. 10/2002. or Law on electronic commerce, Official Gazette No. 173/2003 or Law on electronic certificate, Official Gazette No. 150/2005 or Law on informational safety, Official Gazette No. 79/2007 or Law on electronic signature Official Gazette, No. 91/2006 or Law on electronic legal and business operations, Official Gazette, No. 88/2007.
12. www.bancaintesa.rs