



## Implementation and use of Electronic Banking in Serbia

### KEYWORDS

electronic banking, banking products and services, technological innovations, Internet technology, security

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### ABSTRACT

*In recent times, the times of globalization, a large transformation processes in banking are taking place. Everyday we are surrounded by a large number of new products and services. It comes to the regrouping of banks, introduction and development of new technologies. In this context, the development of all forms of electronic payment and electronic banking is particularly visible and significant. Continuous technological innovation and competition among existing banking organizations and new entrants have allowed the development of a wide range of new electronic banking products and services that have become available and that are delivered to clients and service users. We examined the 1000 users who have used the services listed on the 7 banks in which we conduct research, in order to find out what do they think of electronic banking and how they are familiar with it, and to which extent they apply and use it in Serbia. Therefore, the sample is not random. What's more, he is by nature intentional, but we appreciate that it can represent opinion of bank users. In the second part of the empirical research, we examined 30 banking professionals working in banks with headquarters or branches in Belgrade, wishing to know whether and how the Internet technology improves banking business, as well as how and in what way they recognize and manage the risks. The sample is a combination of intentional and random, and it is good enough to indicate the views, opinions and assessments in this area. The survey was conducted in March of 2014.*

### INTRODUCTION

Introduction and all the general application of modern information technology (IT) in banks, it is very noticeable tendency documented and explained in the relevant scientific literature (Scott D., HE Dougall, Arditti FV, Bandy N. Laudon K.), as well as numerous analyzes and the reports of the World Bank and other key international financial institutions.

Until now, users still have to come to the premises of the bank to get the job done. Today, the bank takes the users home or at his workplace. Electronic banking goes a step further, according to banking activities in the users pocket completely independent of the location in which it is located. Number of financial services to a large extent depends on the available mobile platforms on which to perform. Users can exchange cash or via e-mail or using infrared communications port. The two most popular service of this kind are PayPal and Remit.com. They allow individuals and legal entities to transfer money from their bank account or from their credit accounts

Greater use of electronic banking can increase the efficiency of the banking and payment system to the satisfaction of both consumers and retailers. At the same time, there are also risks to which banks are exposed to electronic banking and the activities associated with it. Banks must be able to manage risk, to control it and to eventually absorb and compensate some losses if they occur. Electronic banking is an opportunity to establish stronger relationships with customers and increase revenue from financial institutions. In the transition process, the establishment of new technologies in the banking structure is a complex task. It should be noted that e-banking is not just a newspaper business, but the electronic application must be linked to the application by the bank or other financial institution for use in their work. Changing lifestyles of users, the need for ever-increasing speed and better performance, leading to increased cus-

tomers demands and standardize services. New technologies allow electronic banking satisfy increasingly sophisticated customer needs and to achieve better cooperation with them. Using new technology in e-banking should understand the specific needs of the user and that they deliver complete financial solutions that give them all the information and features for comfortable work.

Quality of business, the Bank is one of the primary demands of the banking business of developing bank, until today. One of the basic principles of the bank's business is security, since the business of the bank is always contained in greater or lesser degree of risk. With increasing deregulation and competition in the financial service, banking operations becomes increasingly risky. Recognizing the global processes in the field of banking and financial operation, research will focus on the analysis and highlight the complexity and dynamism of electronic banking in the more complicated the global environment, as well as finding the parameters of the implementation and use of electronic banking in Serbia

### EMPIRICAL RESEARCH PRACTICES OF ELECTRONIC BANKING IN SPHERE OF APPLICATION AND USE IN SERBIA

We examined 1000 clients of banking services in order to find out what do they think of electronic banking and how much they are familiar with it.

The survey was conducted in March of 2014. The sample included those people who have used the services of Serbian bank, Commercial bank, Raiffeisen Bank, Hippo Alpe Adria Bank, Banca Intesa and the Postal Savings Bank those days. Thus, the sample is not random. What's more, it is by nature an intentional, but we regard that it can represent opinions of bank clients. Among the 1000 respondents there were both, men and women, people of different education levels, different property and employment status, as well as different

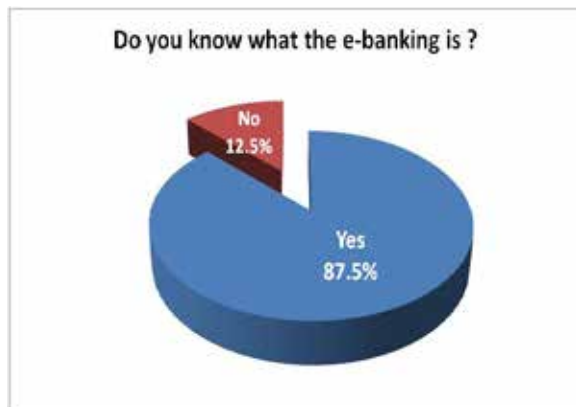
ages. They have all answered the same questions.

**What we found out, or to what empirical results we come to?**

1. Almost 87.5% of the interviewees answered that they know what electronic banking is. This suggests that our users are educated regarding the banking services and in a variety ways they can find out what benefits from electronic banking they can have.

**Table no. 1. Electronic banking**

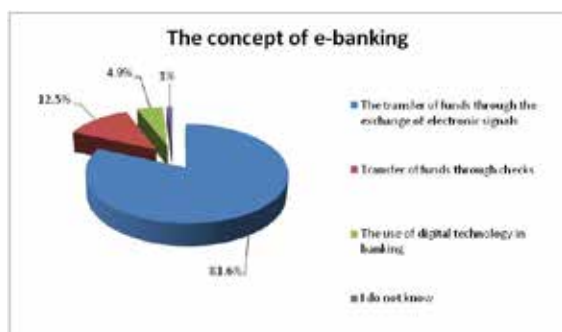
| ANSVER | NUMBER | %    |
|--------|--------|------|
| Yes    | 875    | 87,5 |
| No     | 125    | 12,5 |
| TOTAL  | 1000   | 100  |



2. Most of them who said that they knew what e-Banking was, meaning by that term the transfer of funds through the exchange of electronic signals, while significantly less of them thinks that this is the application of digital technology in banking. We must point out that 12.5% do not know what the electronic banking means.

**Table no. 2. The concept of e-banking**

|    | ANSVER                                                           | NUMBER | %    |
|----|------------------------------------------------------------------|--------|------|
| 1. | Payment obligations with cash                                    | /      | /    |
| 2. | The transfer of funds through the exchange of electronic signals | 816    | 81,6 |
| 3. | Transfer of funds through checks                                 | 10     | 1    |
| 4. | The use of digital technology in banking                         | 49     | 4,9  |
| 5. | I do not know                                                    | 125    | 12,5 |
|    | TOTAL                                                            | 1000   | 100  |

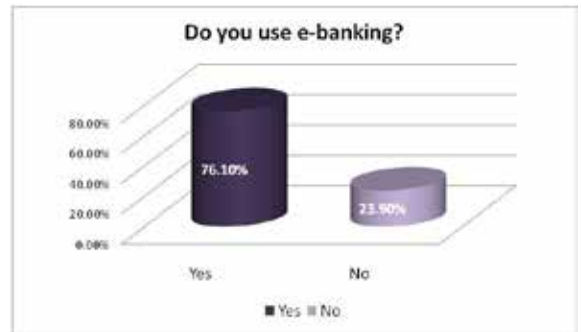


3. Half of those who responded that they know what e-Banking is, do not use it in the right measure. That is, 76.1% of respondents use a specific type of electronic banking service,

which means that we need more time, more information and mass to come to life in our country, and to the extent that it is in other countries.

**Table no. 3. E-banking services**

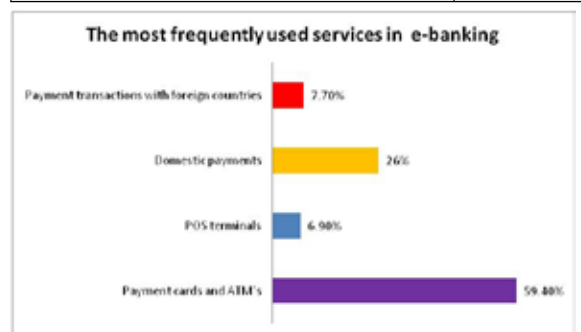
| ANSVER | NUMBER | %    |
|--------|--------|------|
| Yes    | 761    | 76,1 |
| No     | 239    | 23,9 |
| TOTAL  | 1000   | 100  |



4. Almost 60% of electronic banking users, use the credit cards and ATMs, 26% of them use it for performing the payment transactions in the country, and only a small percentage of respondents use it for foreign payment transactions.

**Table no. 4. The most frequently used services in e-banking**

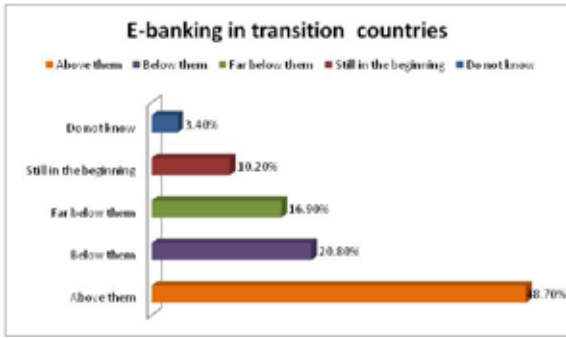
| ANSVER                              | %    |
|-------------------------------------|------|
| Payment cards and ATMs              | 59,4 |
| Pos terminals                       | 6,9  |
| Domestik payment                    | 26   |
| Payment transactions with countries | 7,7  |
| TOTAL                               | 100  |



5. Our respondents mostly believe that our level of using electronic banking in Serbia is far above other countries in transition. It can be seen that 20.8% considered that we were underneath them, and 16.9% that we are far below them.

**Table no. 5. Level of using the services of e-banking in other transition countries?**

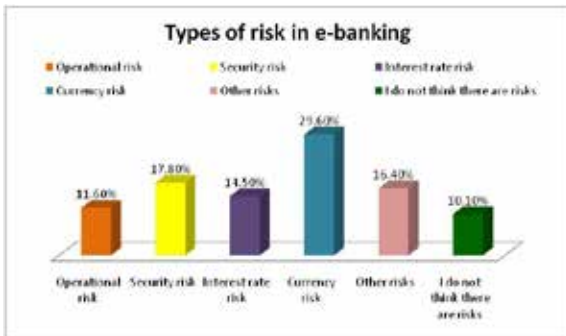
| ANSVER                 | NUMBER | %    |
|------------------------|--------|------|
| Above them             | 487    | 48,7 |
| Below them             | 208    | 20,8 |
| Far below them         | 169    | 16,9 |
| Still in the beginning | 102    | 10,2 |
| Do not know            | 34     | 3,4  |
| TOTAL                  | 1000   | 100  |



6. The largest percentage of the risk of almost 30% is the foreign currency risk, while 10% thought that the risks do not exist.

Table no. 6 Types of risk in e-banking

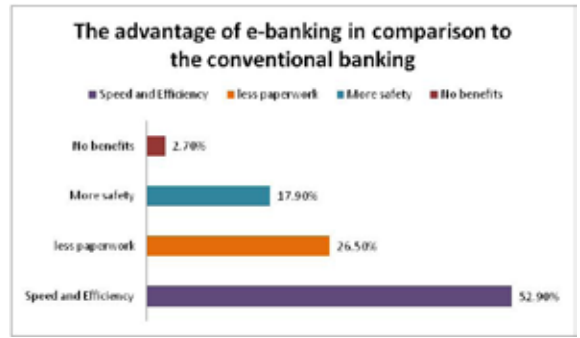
| ANSVER                         | %    |
|--------------------------------|------|
| Operational risk               | 11,6 |
| Security risk                  | 17,8 |
| Interest rate risk             | 14,5 |
| Currency risk                  | 29,6 |
| Other risks                    | 16,4 |
| I do not think there are risks | 10,1 |
| TOTAL                          | 100  |



7. Those who have become users of electronic banking, are pretty familiar with its advantages and disadvantages. They are aware of the risk, but also the speed and efficiency that is significantly above those provided by the conventional banking. It suits them less paperwork and sense of greater security in the business.

Table no. 7. The advantage of e-banking in comparison to the conventional banking

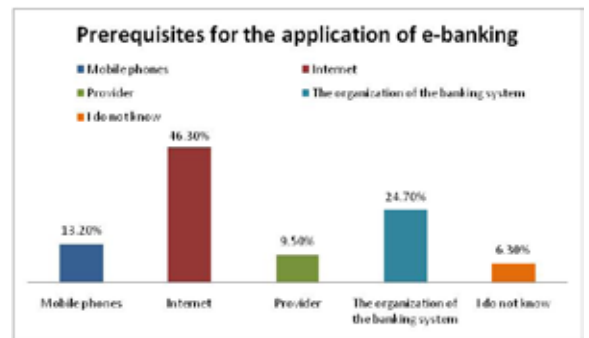
| ANSVER               | %    |
|----------------------|------|
| Speed and efficiency | 52,9 |
| Less paperwork       | 26,5 |
| More security        | 17,9 |
| No benefits          | 2,7  |



8. As prerequisites for the implementation of electronic banking, our respondents have counted the Internet with 46.3%, the organization of the banking system with 24.7%, as necessary, and a smaller number of them, exactly 13.2%, have chosen the mobile phone as advantage.

Table no. 8. Prerequisites for the implementation of E-banking

| ANSVER                                 | %    |
|----------------------------------------|------|
| Mobile phones                          | 13,2 |
| Internet                               | 46,3 |
| Provider                               | 9,5  |
| The organization of the banking system | 24,7 |
| I do not know                          | 6,3  |



For the specified number of surveyed IS managers in banks, 14 of them responded that the implementation of e-commerce has led to the reengineering of business networks, as well as 8 of them to a lesser extent, which is almost 74%. The remaining 8 of them declared that the changes occurred only in certain sectors, and even to the fact that the changes have not happened.

Table no. 9 Re-engineering of business networks

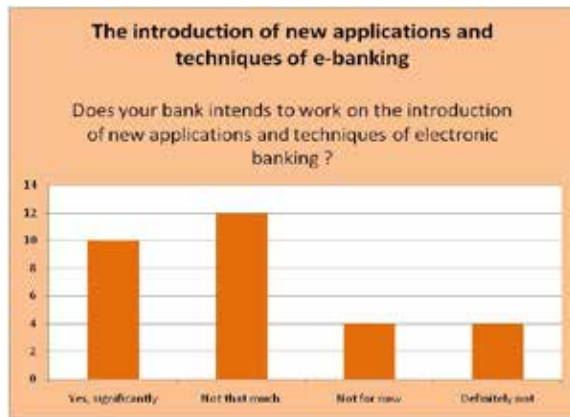
| ANSVER                  | %  |
|-------------------------|----|
| Yes significantly       | 47 |
| Not that much           | 27 |
| No                      | 20 |
| Only in certain sectors | 6  |



When the managers being asked whether their bank intends to work on the introduction of new applications and techniques of electronic banking, 22 of them gave a positive answer which makes 74%. It is interesting, that the same number of them (the four) answered not (for now) or it is not definitive.

**Tabela br. 10. The introduction of new applications and techniques of e-banking**

| ANSVER            | %  |
|-------------------|----|
| Yes significantly | 34 |
| Not that much     | 40 |
| No for now        | 13 |
| Definitely not    | 13 |



The introduction of IT and electronic business in the bank does not increase the usual business risks for 19 IS managers in banks, or they do not estimate that it will reach them. However, four of them believe that the introduction of E-business will lead to significant changes in already existing risks.

**Table no. 11. Increasing of the usual business risks**

| ANSVER                      | %  |
|-----------------------------|----|
| Yes significantly           | 13 |
| Not that much               | 24 |
| Mostly not                  | 30 |
| No                          | 20 |
| There is no such assessment | 13 |

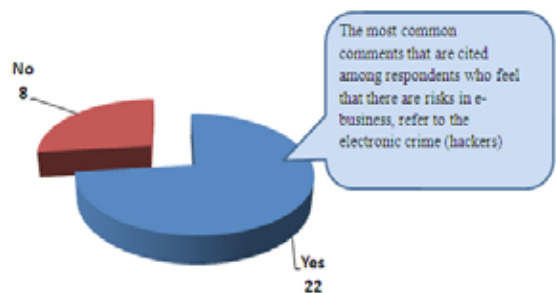


E-business, which has replaced the traditional banking business in most banks, including those in which we performed it carries with it some new risks. Of the 30 surveyed IS managers in banks, 22 of them responded to the IT and e-commerce has led to the emergence of new risks. The most common comments that were cited by those who said that the new risk does occur, the E-Crime.

**Table no. 12. E-business and new risks**

| ANSVER | %  |
|--------|----|
| Yes    | 73 |
| No     | 27 |

**Are the IT and E banking business brought new risks?**



**Conclusion**

E-business is becoming the prevalent way of doing business , which must be given very serious and thorough consideration . Rapidly introduced throughout the world and his inevitable mass application and here in Serbia . Obvious are multiple benefits of electronic banking. It opens up great opportunities for those who are entrepreneurial , fast , flexible and have a lot to offer. The use of electronic banking , requires acceptance and active participation of managers, and this is an excellent investment in the future of the company , but also in the perspective of the people who work there

In previous service users were able to through their mobile device checks the account balance , check the status of your credit card or get some basic financial information . Nowadays, banks have begun to incorporate the possibility of transactions in its services . Of these services in the research we have seen that the most commonly used credit cards and ATMs, pay bills , transfer funds or loans . Today, electronic banking is not an additional service offered by a modern bank , but the reality is that we offer all banks. The number of users is on the increase , and banks are beginning to form their Internet environment , thanks to healthy competition , offer better quality and modern services

Security is one of the most important requirements of e-banking, if not the most important. Research shows that with mobile banking as well as in on-line banking - users have little confidence in the security of the application. Most of the respondents are afraid to send their confidential data over a network, and also a large number of concerned for the safety of transactions. With mobile banking a large number of cryptographic methods is "broken", a mobile communication is pretty easy to follow. Mobile banking and commerce are more vulnerable than other means of communication, and often find themselves the target of hackers.

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