The Effect of the Execution of the Real Time Gross Settlement System (SATNA) on Electronic Banking (Central Bank of Islamic Republic of Iran)

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ABSTRACT

The recognition and the study of the real time gross settlement system (SATNA) in Iran – which is the most important example of electronic banking as well as a safe and secure background for electronic exchanges- is very significant. The method of this study is pair-comparison. This study investigates the effects of execution of the real time gross settlement system (SATNA) on electronic banking in central bank and compromises the most important indexes of electronic banking – before and after execution of this system- on the proceeds of the banks which are the member of the real time gross settlement system (SATNA) in the settlement center of central bank. The results show that electronic banking has been ordered and promoted more than before, in Iran, by applying and execution of this system. In addition, the absence of proper infrastructure for execution of electronic banking – which was expressed in the prior researches-, was compensated by this system considerably and fundamentally.

INTRODUCTION

Invention and development of international dependencies in most political and social aspects -particularly in the condition of the globaliztion of economy-has made extraordinary and important place for essential motivations of integration of banking and financial systems. Establishment of SATNA system (as one of the most important infrastructures for making of banking network and the exchanges of inter-banks market in the country which is the most significant sample of electronic banking in Iran) causes the increasing of the capability of the management of redeployment of money and settlement of the payment mandates and increasing of the ability of central bank in supervision of inter-bank financial exchanges (combating with anti-money laundering) and promotes the level of banks of the country. In fact, in this way, we can become close to the level of the developed counties.

In establishment of this system, administration of Rial dealings of central bank of Islamic Republic of Iran has been determined as the settler and maintainer of Rial settlement accountings of the Banks.

1. Theoretical Principles and the History of the Research

Electronic banking can be introduced as using of developed technology of the networks and communication for transferring of the source (money) in banking system, without any physical presence.

1.2 The Advantages of Electronic Banking

The advantages of electronic banking can be considered from two aspects which are the aspect of the customers and the aspect of financial institutions:

1. from the customer’s view, we can refer to frugality in the incomes, frugality in time and access to different channels for performing of banking operations

2. from the financial institutes, we can refer to the characteristics such as making and increasing of the fame of the banks in presenting of creativity, keeping of the customers in spite of the changing of the location and place of the bank, making opportunities for seeking of new customers in the target markets, development of the geographical limitation and area of the activity and establishment of the condition of perfect competition.

Here, it is necessary to express the duties of the central bank and the duties of the banks of the country in execution and applying of electronic baking. Electronic banking can be considered in two layers like traditional banking: the first layer is the inter-banks operation and the other is the banks - customers operation.
Central bank of Islamic Republic of Iran – like the central banks of the other countries - is the trustee of execution of the first layer- making of the systems and mechanisms of the inter-banks operation. In other words, the central bank must launch (starts up) the systems which perform all the financial redeployments and the inter-banks settlement. The administration of the payment systems are the trustee of the execution and development of the payment systems and electronic settlement (electronic baking) in the baking network of Iran. The payment systems are the main elements of the financial system of each country that have important role in the rapid, efficient and secure transformation of the money among the markets and different activists of financial system as well as in the promotion of the efficiency of the financial system of the country. In addition, development of the payment system can help the financial and economical development of the country through facilitating of the economical exchanges and creating of proper background for execution of the monetary politics.

In Iran, electronic payment and settlement systems of the monies have experienced much development by introduction of the project of payment system of the country in recent years. Some of the positive developments are: establishment of SHETAB in 2002, SAHAB in 2006 and SATNA. Also, we can refer to establishment of PAYA, TABA and consolidation and integration of the accountings and making of SHEBA and more propagation of credit cards and electronic payment in sales terminal.

Providing of facilities for execution of the second layer is the duty of the banks of the countries. The banks have the duty of providing of the services such as telephone banking, internet banking and etc for the customers. As it was mentioned, executing of the real time gross settlement system (SATNA) is one of the services of the payment system of the country. It must be added that all of the projects of payment system must be launched in central bank (international corporation of Informatics, 2008).

The real time gross settlement system (SATNA) is a kind of electronic system which performs the processing and settlement of the payment mandates in gross, singular and real time forms (payments systems, 2009).

1.2 the General Advantages of the Real Time Gross Settlement System (SATNA) for the Economy of the Country:

- This system provides a secure mechanism for the banks to be able to disposes the money with complete assurance which leads to the financial order in performing of inter-bank operation
- This system increases the ability of the banks in management of its financial sources
- Central bank can execute its monetary policies in a more pleasant and better way by using of this system
- The ability of the central bank will increase in the monetary management of the market
- Execution of this system provide the possibility of utilizing of the modern tools of payment and this system will be a kind of stage for optimization of the financial system of the country

In the following figure, the process of settlement of the payment mandate which have been issued by the banks has been shown:

![Fig. 1: The real time gross settlement system (International Corporation of Informatics, 2008)](image)

The most common frame of the payment mandates of the members in this system are in the following order:
1. Bank to bank payment mandate
2. Bank to customer payment mandate
3. Customer to bank payment mandate
4. Customer to customer payment mandate

Consequently, the method of making (origination), issuance, and settlement of the payment mandate have been brought:

Example: referral of Mr. X to the branch of Maskan Bank for depositing the money to the accounting of MS. Y by (in) Keshavarzi bank

The Nature of the Payment Mandates of Customer to Customer (2)

Net: it said to the gross amounts which have been resulted from providing of financial services to the customers of the banks by the other banks

Types of net: media are applied in forming of different kinds of nets which their naming and the place of their calculation is done according to it:

- Cambium net: the media of is cheque. In other words, the customers refers to a bank and render the cheque of another bank and they use the services of the other bank in this way. All the cheques will be sent to the cambium room of the banking documents at the end of the day. Then necessary operations are done for calculation of the gross amount (sums) of indebtedness or the creditorship of one bank.

- SHETAB net: the media which is related to this net is card or cash dispenser (ATM)

- PAYA net: the media which is related to this net is payment mandate

The real time gross settlement system (SATNA) is a kind of background for performing of all the present nets in banking network. For investigation of the effect of performing of this system on electronic banking by using of the method of AHP, the outcome of this system on the most important indexes of electronic banking before and after execution of this system will be considered.

The History of the Research:

The subject of electronic banking is one of the approximately new subjects of banking system. In fact, some writings and texts have been written for more familiarity with it, the necessity of becoming familiar with it, the prerequisites of this familiarity as well as the current and future needs for its development and exhaustiveness. The accomplished studies are in the following way:
The researches centre of Islamic consultative assembly – according to one study called “electronic money and electronic banking” which was enacted in 1385 considers the challenges of the electronic banking system in the following way:

- The absence of economical excuse and necessary risking for using of electronic banking systems
- The presence of weak infrastructures, shortage of financial support and budget, the absence of the necessary private institutes or the absence of their support of electronic banking, the absence of the rules and the necessary legal background and the absence of documentation of the electronic certification and reasons and etc.

Mr. Peyman Noori explains the challenges of electronic banking of Iran in a study called “electronic banking in Iran: the obstacles, the problems and the challenges”. He believes that one of these challenges is the absence of sufficient and rapid attention to the establishment of proper infrastructures for controlling and supervision of electronic banking

Research Method:

According to the research method, the kind of above study is related to field. The method of calculation of percentages can be used in this study. The total sum of the statistical society is 30, so the number of the samples must be 3. Therefore, we can select 3 intercommunications (which can include the payment mandates or the nets of the day) from each bank in the official day. In this way, the mass of the studied sample is 90 cases in the day.

For gathering of the data, we used the sources of the formal statistics of the governmental, statistical calculations as well as the observation of the real time gross settlement system and the method of controlling and supervision of the applied tools of electronic banking in Iran. We used the method of AHP for analyzing of the data. The validity of the research was proved by the applied questionnaires and the help of the supervisor. The method of incompatibility was used for determination of the permanency. In fact, the result is under 10%, so the research has permanency.

In this study, the real time gross settlement system (SATNA) was considered as the independent variation and electronic banking was considered as the dependent variation. Also, the payment mandates were considered as the intermediate variations.

Analysis of the Data:

We referred to the manager of the real time gross settlement system (SATNA) for determination of the degree of the success of the system rather than the amount of the success which was before the execution of this system and its effect on electronic banking. then we derived and extracted the most important and mentioned indexes by the help of the manger and the sophisticated experts of this system which are: cost, speed, meticulousness, using of the modern tools, control and supervision, management of the cash (liquidity) of the market and management of the sources. The gathered data of the sophisticated and the experts is in this way that the management of the sources in the new system than the previous one was strongly preferred. Also, in the new system than the prior one, management of the liquidity of the market is comparatively preferred. In addition, supervision and control in the new system than the preceding supervision and control is preferred from a large to an infinite extent. What’s more, using of the new tools in the new system than the former situation is strongly preferred. Besides, speed in the new system than to the earlier one is preferred from a large to an infinite extent. Above and beyond, cost in the new system than the aforementioned one is preferred infinitely.

After drawing of the decision tree and the pair comparisons according to the spectrum and range of Mr. Sa’ati and making immeasurable by the method of Sa’ati and calculation of the importance rate of the indexes as well as prioritizing of the indexes from the view of the manager of the system and finally calculation of the harmonious average, the following results have been achieved:

<table>
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<tr>
<th>Calculation of the harmonious average</th>
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<tr>
<td>new system</td>
<td>0.437<em>0.833+0.228</em>0.75+0.125<em>0.888+085.<em>0.875+0.057</em>0.833+0.039</em>0.888+0.027*0.9=</td>
</tr>
<tr>
<td></td>
<td>0.82681</td>
</tr>
<tr>
<td>Prior to that</td>
<td>0.437<em>0.332+0.228</em>0.25+0.125<em>0.112+0.085</em>0.125+0.057<em>0.116+0.039</em>0.112+0.027*0.1=0.24324</td>
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After the pair Comparison, we can conclude that the real time gross settlement system (SATNA) has priority than to the other ones. Also, it is observed that the most important indexes of the electronic banking will increases by execution of this system.

The Results and Discussions:

According to the history of the research, the results and the considerations of the accomplished studies show that the challenges of the electronic banking are the absence of proper background for optimization of
using of the tools of electronic banking and the absence of sufficient supervision and controlling. In the current study, we can express that much profits can be provided for all of the people of the society by development of the real time gross settlement system (SATNA) in all of the banks of the country and realization of the culture of using of its services. All of them are in the direction of the national benefits and decreasing of the costs for the banks and their customers.

Observation of pair comparisons of the indexes of electronic banking in the real time gross settlement system (SATNA) than to the previous situation shows the extent of affectedness of this system on the related indexes than the preceding condition. We can conclude that electronic banking in Iran has bee promoted after execution of his system. In fact, this system can compensate the absence of proper infrastructures -which had been expressed in the prior researches- for optimizing of banking. In fact, we can provide safe and secure mechanism for the banks of the country by covering of all of the electronic exchanges through this system.

REFERENCES

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