The Effect of Cloud Computing Network on Financial Institutions Performance

Naser Azad[†]* and Ensieh Sobhi Afshar[††]

[†]*Department of Management, South Tehran Branch, Islamic Azad University. Tehran, Iran
[††] Ph.D. Student, Department of Management, South Tehran Branch, Islamic Azad University. Tehran, Iran

Abstract
The dramatic expansion of modern technologies in the field of computer and information created a great change in the approaches and attitude of people, organizations and governments. The emergence of phenomena such as electronic business, e-banking and commercial intelligence is some of significant outcomes and reasons of information technology influence in economic perspective. According to the importance of this field and the role of processing and computing in science of information technology, a sight emerged, that is, computing is known as the next generation of generic services after water, power, gas and telephone, in recent century. To reach this perspective, various computing beds were suggested by researchers, which newest is the cloud computing. Many believe that, cloud computing is a revolution that will change the entire of information technology industry. The cloud computing technology have a significant impact on the improvement of providing e-banking services and in addition to reduce current problems of e-banking, would reduce the costs related to information technology, too. The basic target of this study is the review of cloud computing network management impact on the performance of financial institutions (e.g. Sepah Bank). Statistic society of this study is the information technology service office of Sepah Bank. Results show that cloud computing has a significant effect on bank performance and financial, innovation and growth, internal process and client benchmarks.

Keywords:
cloud computing, performance, Balance score card, Sepah Bank.

1. Introduction

Banks and financial and credit institutions are very important for each country economic performance and are considered as an important resource of flexibility and innovation and the best place of refuge for entrepreneurial activities and have a significant role to create jobs and to provide a suitable bed for innovation and increasing exports. These enterprises have more flexibility and can comply their selves more easily with the environmental accelerated changes and react faster to the economic and political factors.

As well as banks and financial and credit institutions are the operator of employment of a great part of countries populations and training skilled work force (Mozafari، 1394).

Nowadays, economic and commercial development of country dependent on banking industry promotion alongside other industries of the country as well as banking industry of other developed countries. The increasing growth of global commerce causes more extensive changes in international commercial relations and it is one of the most important economic programs to obtain foreign exchange earnings in countries; so planning for foreign exchange earnings involves the understanding of exchange importance in national currency, the conversion of foreign currency into national currency (exchange rate) and mutual role of banks and exchange market due to the exchange rate fluctuations risk. Among these, banks, as commercial intermediates, play an important role in financial transactions related to trades between countries; so that, knowledge of financial markets in origin and destination countries and timely and accurate awareness of exchange rate changes by banks in various countries may influence on the profitability of these financial institutions and ultimately their countries and this issue provides fertile ground for growing activities in international fields (Babazadeh et al. ، 2011) One of the world update technologies that may play a key role to solve some challenges facing the financial and banking institutions in providing e-banking services to users, is cloud computing technology.

Today, the development of knowledge boundaries have been depended on computing technologies. As starting point of these technologies, one can refer to a computer network formation, where only a few computers were interconnected. Then, these small networks connected to each other and create Internet, in which, networks are shared. In that time, there was a need to a bed for information interchange. So, the concept of World Wide Web, WWW, was formed, through which the information was shared among users. In this regard, a new technology called mesh computing was born. Where resources were shared remotely and information technology was aimed at increasing efficiency and processing power. At the present time, we are faced with a new approach called cloud computing, where, services are shared through the Internet (Safari, 1392). According to the increasing growth of technology and the variety of user needs in the field of information technology, the cloud computing becomes

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more important. Because the deployment of computational infrastructures in any organization requires spending a lot of time and man-forces, which sometimes cannot fit to the organization's operative power. Hence, organizations tend to use such technologies to improve their targets (Avaran, 2014).

2. Problem Explanation

Cloud computing is introduced as a technology which in coming years will have the largest and fastest advancement and will capture the market. Although, there are many definitions of cloud computing, but there may be a general consensus, in both computing industry and the university, which say cloud computing provides required resources and services across the internet. This type of computing allows builders and developers to write their case applications and run in a cloud environment (Yunesian and Pooyan, 2012).

Different formal definitions can be found about cloud computing. But the best definition provided by National Institute of Science and Technology (NIST), introduce information technology as: The cloud computing is a model to provide network convenient access, independent of location and perfectly fits with the user request, to a shared pool of computing resources (network resources, servers, information storage areas, applications and generally, network services), that one can download and spread the resources fast, with minimum management effort and lowest connection extent with provider (Shahzad, 2014). Some cloud computing advantages for e-banking included:

a) Reducing information technology costs.
b) Speed and fast flexibility in supplying hardware resources.
c) Increasing the efficiency of information technology specialists
d) Increasing the efficiency and reducing waste of resources.
e) Reducing the time of providing products to the market (Safari, 2012).

Organizations and administrative units with every mission, purpose and vision that they have, must be responsible to the clients and stack holders, due to establish a firm which aim is profitability and its clients satisfaction and create an organization which aims at fully and precisely implementing the legal obligations and contributes to realize the targets of development and excellence of the country. Therefore, the survey of performance results is deemed an important strategically process. Quality and effectiveness of organization improvement and performance strategies, are determent and critical factors to realize development and welfare programs. Balance Score card is one of recent management innovation, by Norton and Kaplan (1992), suggested as a tool for performance measurement, in 1996, as a tool for implementing strategy, and in 2004, as a model for establishing alignment between the organization human resources, information and funds. This tool has found many applications in strategic decisions (Asgari, 2015)

In this study to evaluate the bank performance a Balance Score card (BSC) provides a performance measurement system beyond and more comprehensive than financial measurement systems. In Balance Score card, in addition to financial indicators, the organization situation is examined by indicators in three other aspects including clients' aspect, processes and growth and learning, with human resources and information systems. Financial performance is dependent on satisfaction or dissatisfaction of customers. Satisfaction or dissatisfaction of clients is the result of efficiency, yields and quality of the organization processes. How doing processes, also depends on human resources quality, motivations and authority to act and also depends on information systems (Babaei, 2005). At present, the balance evaluation system is developed as a management tool and is known and used by leading countries both at national and international level and is indicated as strategic management. One of the issues that inhibits implementing strategies is that the strategy remains at level of generalities or actions and general orientations. In response to this issue, the providers of Balance Score card, pose the concept of strategy map in the framework of balance Score card. Strategy map attempt to demonstrate the organization strategies in a causal relation and show that how organization strategies can become to measurement and operational aims of each people, which must be followed by organization units and even organization employees (Motameni et. al.2011). This study seeks the role and effect of managing cloud computing network on Sepah Bank performance.

3. The Importance and Necessily of the Research

In today's Society, information technology and Internet are integral component of people's lives, and by changing people's life style, the needs like information security, fast processing, and instant access to information and most importantly saving money also changed. Normally, by expanding the needs, organizations and people would have needs which are entirely different with the past. So it is natural, for the organizations to follow a strategy for reducing costs and better response time. On the other hand, in 21st, users have no tend to use high processing power devices, with the possibility of easy access to internet and portable devices, and increasingly

tend to use service-oriented services. Indeed, a solution, posed to solve emerging problems, in the recent decades, is a technology called cloud computing which seems in recent years, we close to McCarthy dream, by new processing methods, that is, " processing will be used finally as the public utility software" and cloud computing is known as the biggest step in achieving this ideal. This technology is such important in the researcher's view that is in the list of 10 top technologies in the world and is expected to change Society individual lives such as internet, which introduced a new life style to the people, and even proceeds to such extent that can control the kitchen sink. But unfortunately the complexity of the issues raised in this new technology and its being emerging caused even those graduates of computer this technology (Fathikiadehi, 2012).

Commercial banks are financial institutions which collect stagnant funds from people and grant facilities to the traders, industrialists and other applicants. Indeed, bank by it's the people operation neither want nor can participate in economic activities because of various reasons such as: the lack of knowledge and expertise, the lack of capital and the fear of investment risk, to those need financial resources to invest. Since the target of commercial bank is profit, naturally, the bank must attract resources cheaper and give it with the maximum interest to the loan applicants. So, the primary and basic goal of bank, such as other organizations designed to yield a profit, is maximization its owners wealth (Karimi, 2005). Answering the above questions makes the need to evaluate financial performance, more important whereby the banks check their performance in terms of profitability, capital adequacy, asset structure and the liquidity of banks than competing banks, to be able to examine their situation and improve their performance. There are several approaches to evaluate performance, among which, efficiency measurement may contribute effect- lively to achieve research goals (Najafi, 2004).

E-banking and electronic commercial now and very complex and adapting information technology with commercial planning. By growth of information technology and increasing commercial transactions, e-banking is propounded as the main basis of electronic commerce, by using electronic business in the world and naturally presence of the bank in doing affairs related to financial exchanges, and play the main role to implement in information technology (Hasani and Noor, 2011).

4. Research Background

Poorsadeghi and Shahbahrami (2014), proceeded to review feasibility of providing E-banking services in cloud computing. They expressed that information technology development cause revolution in the services sector of banking industry. Various E-banking services are provided through one of ports as E-banking products such as ATM, POS and internet bank, by using various types of information technology resource including hardware, software, data centers, and communication networks. Thus, investment and a lot of costs imposed on banks.

Son et.al. (2014), categorized the perspectives of selecting providers of cloud services in five categories:

1. Using methods of decision- making;
2. Using representative models of information;
3. Using the parameters of cloud services specifications;
4. 4. Content and; 5.

Sekmy et al. (2009) by using balance evaluation and fuzzy hierarchy technique proceed to evaluation of Turkish banks. In this study, the huge performance of banks were reviewed in both financial and non- financial sectors. Capital adequacy indicator, asset quality, profitability, liquidity, revenue structure and cost and stack group were reviewed to evaluate financial performance as well as pricing indicator, marketing, productivity and providing services were reviewed to evaluate non – financial performance. The researchers also ranked studied banks by using TOPSIS technique. Siadat et.al. (2015) reviewed the effective factors on cloud computing acceptance in various countries. This issue aimed at testing the impacts of various environmental, Technological organizational and human factors on the survey of acceptance of technological innovations in the form of cloud computing by countries. Browsing former papers related to adopting technological innovations formed the basis of research topics. The comparison method was implemented to analyze the difference between their clients tends of seven countries including:

Iran, China, US, India, England, Australia and Oman for acceptance of cloud computing services. In most countries, the approach of interview and question nary was used to identify the main factors of cloud computing acceptance. Findings cloud computing services in these seven countries are: reduction in costs, achievement to competitive advantage, understanding usefulness flexibility, ease of use other advantage of using this technology than the previous generation.

Shadlee et al. (2012) studied modeling the cloud architecture for bank systems. They suggested that novel concepts are formed by development of new internet operational techniques performance. This thinking has an important role, especially in the development of information technology in various fields. One of these concepts is the cloud. Cloud computing, demonstrates great changes in the way of computing cooperation. In this study, according to previous experiment, using of cloud model in the bank environments was analyzed. This paper represents a use – case which examines the commercial problems with cloud computing system and shows the effective

commercial considerations on firms when using cloud computing.

Sheikh Ahmadi et al. (2013) examined the application of cloud computing layers in various e-banking sectors. They expressed that cloud computing in considered as one of determent technologies in the future of many industries. Cloud computing includes three layers as service, platform as services and software as service. They concluded that cloud computing gives an opportunity to the banks for a novel approach about utilization of the potential of information technology and communication, more effective, in order to provide broader services.

Alizadeh et al. (2016) evaluated the authentication of mobile cloud computing. They stated that mobile cloud computing (MCC), in accordance with latest development of mobile science, is the distributed computing model. The combination of many heterogeneous cloud – based resources reinforces the set of computing capabilities of limited resources of mobile devices. Runtime and energy consumption in the MCC improved significantly to cloud – based resources by transformation of running intensive resource tasks such as image processing, 3D performance and host mobile voice recognition. Results showed that we will need to the authentication approaches, in future, which will be designed based on the abilities and limitations of MCC environment. Finally, design factors may lead to provided effective authentication mechanisms, and open challenges were detected, according to strengths and weaknesses.

Gupta et al. (2013), in their study named "utilizing cloud computing by small and medium businesses", recognize that the factors like cost reduction, ease of use and persuasiveness, confidence, cooperation and sharing, security and privacy protection, are effective in utilizing cloud computing by small and medium firms.

Lian et al. (2013) in a study named "An exploratory study to understand the critical factors affecting on decision to use cloud computing in Taiwan hospitals technologically, humanly, organization ally and environment tally", pointed that information technology included human factors, information top manager innovation and perceived technical merits. They conclude that organizational factors include comparative advantages, senior manager support, adequate Resources and benefits and finally environmental factors which involves government policies and perceived industry pressure.

Lin and Chen (2012), in their research names "cloud computing as on innovation: perception, attitude and applying by using innovation dissemination theory of Rogers", introduce five factors; comparative advantages, compatibility, complexity and observe ability and test-ability which have important effect in utilizing a new innovation.

Manugran et al (2016) investigated the architecture of Meta cloud data storage to secure big data in cloud calculation. They suggested that a cloud increasingly is applied to store and process big data. In this paper, we first discuss, about challenges and potential solutions of big data protection in cloud calculation. Second, we suggest the meta cloud data storage architecture to protect big data in a cloud calculation environment, this framework ensure efficient big data processing in the cloud computing environment and greater achievement of business perspective Mahmoodi and Pashoten (2015), studied and analyzed the security models and architectures provided in the field of cloud computing. They show that according to increasing growth of technologies and the variety of user needs, in the field of IT, the place of cloud computing is more pronounced.

Because, the development of computing infrastructure, in every organization, requires to spend many time and cost and human forces, which sometimes, may not fit to the organizations operative power. Thus, organizations tent to use these technology to develop their goals. The fully open and distributed structure of cloud computing and its services makes information technology to be an attractive target for the attackers. The study target is to review and analyze the security models and architectures provided in the field of cloud computing. Hachemi and Safaei (2010). Investigated a framework to select services based on cloud computing technology in e-banking. The aim, at this study, is to provide a relevant framework in order to evaluate services provided by cloud suppliers for utilizing in the banks, so that banks cloud evaluate various in the computing suppliers and choose the best case. Results show that the cloud computing technology affects significantly in electronic banking services improvement as well as the costs related to information technology.

Yunesian and Pooyan (2012), reviewed the design and implementation of portable and mobile banking management system as a new paradigm. They concluded that implementing banking management system based on tablet and cloud processing in order to convert the banking management system area and the banking management system to an active environment by using update and new technology of tablets in banking management systems rather than desktop computers and laptops it can be directed to situations where banking management system members always have their work table and desktop computer with their selves, in addition to accelerate and agility of activities of banking management system.

5. Research Purposes

The main objective of this research is to evaluate the impact of cloud computing network management on the performance of Sepah Bank in Tehran. Secondary objectives of this research are:

- the review of cloud computing network management in banking.
- the review of information technology services performance in Sepah Bank.
- the review of the effect of cloud computing network in the financial benchmarks of performance.
- the review of cloud computing network management in on internal process benchmarks of performance.
- the review of cloud computing management impact on client benchmarks of performance.

6. Research Methodology

Current research is an applied research in terms of nature and target as well is a descriptive in terms of method of collecting data for testing hypothesis because describes and studies what there is. Also, since the relationship between the variables examined in this study, it is correlational type. So we can say he kind of current study is applicative, descriptive and correlational.

Statistical society of this research id the information technology services office of Sepah Bank and to estimate the sample size, we use Orkut- Cochran, which is, in this study, equal to 100. Gathering the information required in this research is done in two parts: first part includes collecting data in the field of theory ABC of the matter and case history done by using librarian study method and computer search of internet and informative resources. Part two include collecting field data, for this purpose, a questionnaire has been developed. The survey questionnaire was designed based on the 5-option range of LIKERT. Part of cloud computing variable contains & elements (use fullness, ease of use, subjective norms, user perceiving, decision to use, risk, adaption and use) and 35 questions and variables, the information technology services performance contains 4 elements (financial benchmarks, innovation and growth standards, internal process criteria, client standards) and 59 questions. In this study, the balance score card is used to measure the performance.

Primary and secondary hypothesis are as follows: the primary hypothesis is:

Cloud computing network management effects on INFORMATION TECHNOLOGY services of Sepah Bank.

The secondary hypothesis are:

The wide spread of COVID-19 virus all over the world has changed our lives in many aspects. People's life has been changed socially, financially and economically due to the COVID-19 virus. One of the most important changes is the economic changes. The economic changes could have direct or indirect consequences on people. This proposal focuses on the economic consequences COVID-19 and specifically its impact on graduates seeking jobs.

Cloud computing management effects on financial criteria of the performance of Sepah Bank. Cloud computing management effects on client standards of Sepah Bank.Cloud computing management effects on internal process criteria of Sepah Bank. Cloud computing management effects on growth and innovation benchmarks of Sepah Bank.The conceptual model of the study is as follows:

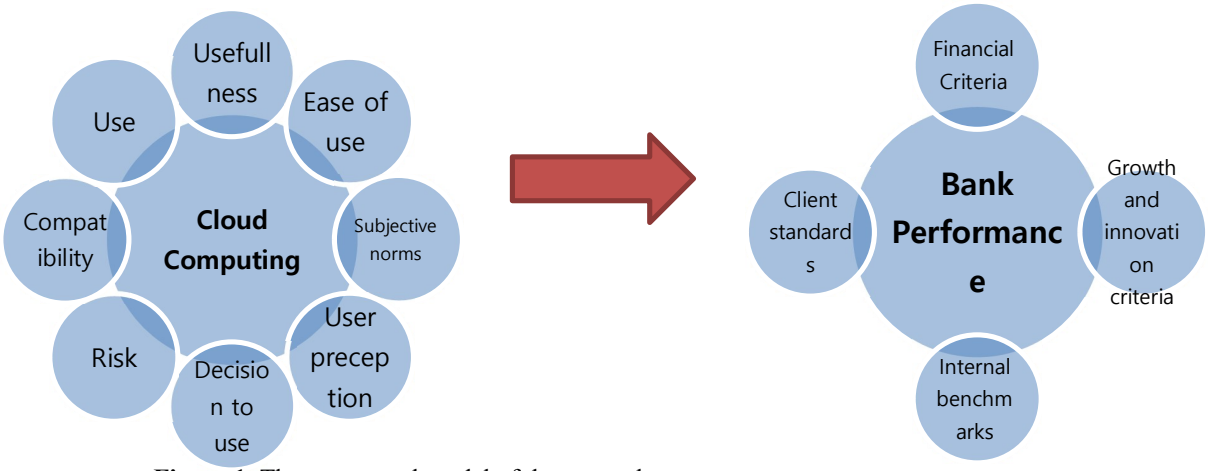

Figure 1. The conceptual model of the research

In this investigation, the validity of questionnaires is evaluated by experts, and the method of alpha Cronbach is used to deliberate stability of questionnaire which is 0.908 for computing variable and 0.895 for bank performance variable.

It is verified in a Significance level of 5%. The statistical analysis of this research is done in two statistical levels of descriptive and inferential. To analyze data, the soft wares excel and SPSS were used. Data analysis will done by calculating central indicators and dispersion indicators in descriptive statistics part. Inferential statistics is for generalizing the findings from statistical sample to statistical population. In order to check the normal distribution of variables, Kolmogorov- Smirnov test is used. After determining the normal distribution of data, the regression test is applied to determine the simultaneous coefficient between two variables. The soft wares used in this study, are excel and SPSS.

7. Results and Discussion

In this part, the descriptive statistics of variables is first expressed. And followed by inferential statistics and investigation of hypothesis are analyzed. Some descriptive statistic of research variables is detailed in following table.

Table 1: The values of descriptive statistic of research variables.

Element	Average	Standard deviation	Skewness	Kurtosis
Cloud computing	3.531	0.577	-0.301	-0.705
Bank performance	3.692	0.492	-0.328	0.023

Source: research findings

Note: the very low, low, medium, much, and very much values for each variable are evaluated by numbers 1, 2, 3, 4, 5, respectively.

As known, performance variable of bank is the highest average. The table also shows that cloud computing variable has higher standard deviation which shows the distribution of the variable. The table also shows that the skewness of both variables are negative and variable kurtosis of cloud computing is negative and bank performance kurtosis is positive. One of the main conditions to apply regression is the normality of data. The Kolmogorov- Simonov test is used to normalize data which results are provided in table2.

According to table 2 Significance level of all variables of the research is over 0/05, thus there is no reason to reject the null hypothesis based on the data is normal; meaning that all research variables are normally distributed. In this section. Hypothesis are tested by using linear regression. First, the regression between cloud computing network management and information technology services performance of Sepah Bank is calculated.

Table.2: the results of Kolmogorov- Simonov test.

	Organizational performance	Ergonomic specifications
Sample size	100	100
Average	3.692	3.531
Standard deviation	0.492	0.577
Absolute value of the maximum different between boundaries	0.125	0.133
positive	0.092	0.092
negative	-0.125	-0.133
Kolmogorov - Simonov test	1.253	1.329
Significance level	0.087	0.058

Source: research finding.

T

Table.3: coefficients from regression test of the main hypothesis (dependent variable: bank performance)

	None standardized coefficients		Standardized coefficients	Significance level	Durbin-Watson	determinant coefficient	T
	Standard deviation	coefficient	Beta coefficient				
Constant value	0.248	1.719		0.000	2.012	0.63	6.940
Cloud computing	0.069	0.559	0.632	0.000			8.064

As shown is equal to 0/000 which is less than 0/05 so the cloud computing variable is significant in terms of statistics and the assumption H. of the hypothesis is rejected. Thus the main hypothesis of the research which say "cloud computing network management effects on information technology services performance of Sepah Bank". Is accepted. Autocorrelation test is one of the classic regression assumptions. Durbin- Watson statistic is a test statistic which is used to investigate the existence of auto-regression (auto regression= the relation between values distinguished by specified time lag) among residuals of the regression analysis. The statistics value always is between 0-4 which accepted thresholds are as follows:

The value of 2 for this statistic shows the lack of autocorrelation which is desired case in the main hypothesis related to residuals in regression analysis. Generally the value less than 2 shows positive successive correlation (a kind successive correlation where positive residual value for an observe increases the chance of being positive of other observe residual and vice versa) and the value over 2 of the statistic shows negative successive correlation among residuals. Information technology should be noted that if the test statistic is either less than 1 or over than 3, information technology will show there is positive or negative auto correlation between residual. As specified the value of this study is 2.012 that shows there is no autocorrelation, the desired case in the main assumptions related to residuals. In this section, the regression is calculated between cloud computing network management and client standards of performance.

Table.4: the coefficients from regression test of the first secondary hypothesis (dependent variable: bank performance)

	None standardized coefficients		Standardized coefficients	T	Significance level	Durbin-Watson	determinant coefficient
	Standard deviation	coefficient	Beta coefficient				
Constant value	1.242	0.382		3.252	0.002	1.866	0.31
Cloud computing	0.716	0.107	5.561	6.706	0.000		

Source: research findings

As illustrated in table 4, the Significance level of cloud computing is equal to 0.000 which is less than 0.05, so the cloud computing variable is significant in terms of statistics and the assumption H. is rejected thus the firs secondary hypothesis is accepted which says: "cloud computing network management affects financial benchmarks of information technology services performance of Sepah Bank". As it is known, the value of Durbin-Watson statistic of this model is 1.866 which shows the lack of auto correlation, the desired case in assumptions related to residuals. In this section the regression between cloud computing network management and client criteria of performance, id calculated.

Table. 5: the coefficients from the second secondary assumption regression test (dependent variable: bank performance).

	None standardized coefficients		Standardized coefficients	Significance level	T	Durbin-Watson	determinant coefficient
	Standard deviation	coefficient	Beta coefficient				
Constant value	1.616	0.293		5.509	0.000	2.288	0.27
Cloud computing	0.520	0.082	0.526	6.115	0.000		

Source: research finding.

As, shown in table 5, the Significance level of cloud computing is equal to 0.000 which is less than 0.05, so the cloud computing variable is significant in terms of statistics and assumption H. is rejected. Thus the second secondary hypothesis of the research is accepted which says "cloud computing network management effects on client criteria of information technology services performance of Sepah Bank". As, investigated the value of Durbin-Watson statistic of this model is 2.282 which shows the lack of autocorrelation, the desired case in related assumptions to residuals.

Table 6 the coefficients from third secondary hypothesis test.

	None standardized coefficients		Standardized coefficients	Significance level	T	Durbin-Watson	determinant coefficient
	Standard deviation	coefficient	Beta coefficient				
Constant value	2.283	0.240		9.500	0.000	1.631	0.31
Cloud computing	0.447	0.067	0.558	6.651	0.000		

Source: research finding

As, shown in table 6, the Significance level of cloud computing is equal to 0.000 which is less than 0.05, so the cloud computing variable is significant in terms of statistics and assumption H. is rejected. Thus the third secondary hypothesis of the research is accepted which says "Cloud computing management effects on internal process criteria of Sepah Bank". As, investigated the value of Durbin-Watson statistic of this model is 1.63 which shows the lack of autocorrelation, the desired case in related assumptions to residuals.

Table.7: the coefficients from fourth secondary hypothesis regression test (dependent variable: bank performance)

	None standardized coefficients		Standardized coefficients	Significance level	T	Durbin-Watson	determinant coefficient
	Standard deviation	coefficient	Beta coefficient				
Constant value	1.735	0.282		6.153	0.000	1.853	0.34
Cloud computing	0.570	0.079	0.589	7.222	0.000		

Source: research finding

As, shown in table 7, the Significance level of cloud computing is equal to 0.000 which is less than 0.05, so the cloud computing variable is significant in terms of statistics and assumption H. is rejected. Thus the fourth secondary hypothesis of the research is accepted which says "Cloud computing management effects on growth and innovation benchmarks of Sepah Bank".As, investigated the value of Durbin-Watson statistic of this model is 1.853 which shows the lack of autocorrelation, the desired case in related assumptions to residuals.

8. Conclusion and Suggestion

By fast developing of computer hardware and software, the cloud computing became host flow in science and industry. Cloud computing is the result of many factors such state. Information technology is based on network and in the form of services for consumer. Cloud computing system scalability and high reliability. The source in cloud computing system is specified for application and the user does not know the source location. Users can access to data and applications from each location. One can share sources in cloud systems among many users. Cloud system can improve its capacity by adding more hardware to be able act effectively with increased load when workload is increasing. Cloud resources are provided on the required base. Cloud computing provides facilities for banks through which, technology costs is reduced and capacities, abilities and credits is increased and many traditional activities provided with better quality results show that all assumptions are accepted. And coefficient comparison in secondary hypothesis shows that highest cloud computing variable coefficient is related to firs secondary hypothesis and lowest coefficient is related to third one, which represents that cloud computing has the maximum impact on financial criteria of performance and minimum impact on internal process benchmarks of performance. Introducing each new technology to organization, brings many risks about implementing and utilizing that technology.

Therefore, it is very important that the risks related to each new or implemented technology, not only must be known m but also a strategy must be regulated to help organizations to manage risks better and reduce them. It is recommended to have an appropriate risk management program m before signing the first agreement as be able actively and continuously to identify, control, evaluate and manage technology and systems risks to prevent their occurring or reduce their impacts. Iran information technology organization must establish a mechanism to identify, evaluate and reduce the risks of cloud computing implementation in government organizations. The structure of making policies of information technology in government organizations must work under information technology organization. A govern relevant organization must be established to oversee the risk management plan because information technology organization be able to identify risks for cloud technologies and implement that technologies into information technology of organizations.

Some of other recommendations are: providing necessary information to increase awareness and confidence and assurance coefficient in the field of cloud computing applied in banking.

- According to the fact that much many costs are spent to develop banking systems, it is very important to ensure that people use these systems.
- It is recommended the ranking in future studies be done by using performance benchmarks. Applied in this study.
- It is recommended to insert the control variable, affecting on performance, also into the model.
- It is recommended to use other calculation methods in future studies.
- It is recommended that future studies be conducted for all banks to have more reliable results for central bank authorizers and government to make policies.

References

[1] Babazadeh, Mohammad; Farokhnezhad, Farshid and Aghababaei, Mohamed Ibrahim (1391), "Short-term and long-term effects of exchange rate variations on the profitability of foreign banks in the form of vector error correction model", Journal of Money and the economy, Issue 9 , pages 225-205.

[2] Babaei, AA (1385), Design and implement a performance measurement system using Balanced Score card and goal-oriented measures, Master's thesis, Tehran University.

[3] Poursadegh, Peyman and Asdollah ShahBahrami, (1394), The feasibility of providing electronic banking services in the cloud computing, The second congress of new technologies to achieve sustainable development, Tehran, the center of strategies to achieve sustainable development, Mehr Arvand institutions of higher education.

[4] Siadat, SH; Mohamadzaky Elaheh and Shahvari M., (1395), The investigate of the factors influencing the adoption of cloud computing in different countries, The fifth International Conference of Accounting and management and second Conference of entrepreneurship and open innovation, Tehran, Hamayeshgaran Mehr Eshragh

[5] Shaddel, A.; Ghorbanzadeh Pervaiz Kheirandish Davar and Jangi Friba (1392), The modeling of cloud architecture banking system, The sixteenth Conference of Mechanical Engineering Iran, Kashan, Faculty of Mechanical Engineering of the country.

[6] Sheikh Ahmad, Saadi, Nasiri Fariba and Ali Nasiri Mofakham Nejati (1393), Appling different layers of cloud computing in e-banking sector, The National Conference on Applied Research in Accounting and Management Sciences, Tehran, University of Applied Sciences.

[7] Safari, N. (1392), Providing readiness assessment model for small and medium organizations using cloud computing, Master Thesis, University of Sistan and Baluchestan, Faculty of Management and Accounting.
[8] Asgari, Hani (1395), Exploring the relationship between indicators of the Balanced Scorecard and performance of the IT department in the bank's financial office, master's thesis, Islamic Azad University Central Tehran Branch, Department of Management and accounting.
[9] Fathi Kiadehi, Elias (1392), The feasibility of implementing cloud computing in industries and organizations of the opportunities, threats, Master Thesis, University of Nasir al-Din al-Tusi, Department of Industrial Engineering.
[10] Mahmoudi, Peshotanu Roya and Arezou, (1395), An analysis of models and security architectures offered in the field of cloud computing, The International Conference on Computer Engineering and Information Technology, Tehran, Permanent Secretariat of the Conference.
[11] Mozaffari, M. (1394), The impact of diversification of income sources of risk and performance indicators Iranian banks,Master's thesis, Allameh Tabatabaei University, Faculty of Management and Accounting.
[12] Motameni, AR, Fatahi, Karimi Vahid, Seyyed Mohammad. (1391). Evaluating the performance of the branches of an insurance company using an integrated approach Balanced Scorecard and Fuzzy HADM techniques. Insurance Journal, Year 27, n.
[13] Najafi, M. (1384), Evaluating the Effectiveness of Sepah Bank areas by using the analytic hierarchy process and data envelopment analysis Thesis Master of Industrial Management, Tarbiat Modarres University, Tehran.
[14] Hashemi, Seyed Mohsen and Safa'i Laleh, (1390), Providing a framework for choosing electronic banking services based on cloud computing technology, the National Conference of electronics, Hamedan, Islamic Azad University, Hamedan.
[15] Yunesian, Younis and Pooyan Ali Akbar, (1392), Design and implementation of portable and mobile banking management system with structure based on tablet technology and cloud computing as a new paradigm based on banking, money management and banking development of the first national conference, Tehran, permanent Secretariat of the conference of monetary management and banking.
[16] Alizadeh, M., Abolfazli, S., Zamani, M., Baharun, S., & Sakurai, K. (2016). Authentication in mobile cloud computing: A survey. Journal of Network and Computer Applications, 61, 59-80.
[17] Avram, G. (2014). Advantages and challenges of adopting cloud computing from an enterprise perspective. Proceedings of the 7th International Conference Interdisciplinarity in Engineering, Procedia Technology 12: 529-534.
[18] Gupta, P., A. Seetharaman, Raj J. Rudolph. 2013. The usage and adoption of cloud computing by small and medium busines. International Journal of Information Management (33): 861- 874.
[19] Husni A.K., Noor M.A.S. (2011)," The Impact of E-Banking on Bank Profitability: Evidence from Jordan" ‹Middle Eastern Finance and Economics ISSN: 1450-2889 Issue 13.
[20] Lian, J., D. Yen, and Y. Wang. 2013. An exploratory study to understand the critical factors affecting the decision to adopt cloud computing in Taiwan hospital. International Journal of Information Management, http://dx.doi.org/10.1016/j.ijinfomgt.2013.09.004
[21] Lin, A., and N.-C. Chen. (2012). Cloud computing as an innovation: Perception, attitude, and adoption. International Journal of Information Management 32 (2012): 533–540
[22] Manogaran, G., Thota, C., & Kumar, M. V. (2016). MetaCloudDataStorage architecture for Big Data security in cloud computing. Procedia Computer Science, 87, 128-133.
[23] Secme, Y.N., Bayrakdaroglu, A., & Kahraman, C. (2009). Fuzzy Performance Evaluation in Turkish Banking Sector Using Analytic Hierarchy Process and TOPSIS. Expert System with Applications, 36(9), 11699-11709.
[24] Shahzad, F. (2014). State-of-the-art Survey on Cloud Computing Security: Challenges, Approaches and Solutions. Proceedings of the 5th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN-2014). *Procedia Computer Science* 37: 357-362.
[25] Sun, L., Dong, H., Khadeer Hussain, F., Khadeer Hussain, O., Chang, E. (2014). Cloud service selection: State-of-the-art and future research directions. Journal of Network and Computer Application, 45: 134-150.