

# **Identification of Factors Affecting the Returns and Performance of Financial and Insurance Companies Listed in the Tehran Stock Exchange**

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## **Abstract**

*Banking and insurance industries are the strategic pillars of every country's economy and play a key role in the economy of countries. Without financial and insurance institutions, the financial sector of the country will be no longer effective. Therefore, determining the factors affecting the returns and performance of these institutions seems necessary. So, in this research, the efficiency and effectiveness of financial and insurance institutions and their influential factors in 18 banks and listed insurance companies in Tehran Stock Exchange were studied. To do this, the data of selected financial and insurance institutions during the period of 2009-2016 were extracted using Rahavard Novin software and the model was estimated using the data panel method and Eviews9.0. Before estimating the model, using the unit root test of the Dickey Fuller, the variables stationary property were checked and confirmed, and the Jarque-Bera test was approved for the normal distribution of variables.*

*The results of the model estimation showed that at a significant level of 5%, the size of financial and insurance institutions, financial leverage, and the concentration ratio on their performance and returns had a positive effect, and this effect was statistically significant at 5% significance. Also, credit risk has a negative effect on the performance and returns of these*

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*institutions and this effect is statistically significant at 5% significancy. The effect of the volume of state ownership on the performance and returns of financial and insurance institutions is negative, but this effect is not statistically significant for the returns of these institutions.*

**Keywords:** *Performance, Returns, Financial and Insurance Institutions, Data Panel*

## 1. Introduction

The most important part of active financial institutions in each economy is the banking and insurance industry. The banking industry is considered an important part of any financial system, and has substantial importance in countries, such as Germany, France and Italy. There are many reasons based on the empirical and theoretical evidence that the existence of strong banks is important not only for the banking industry of these countries, but also for their national economy. In national economies, banks as financial institutions play the role of financial intermediation, and therefore, the functions of savings, investment, production, employment, and growth in the national economy are influenced by decisions, actions and operations of banks. In Iran, banks also play a key role in the financial system and the national economy. In other words, Iran's economic and financial system relies heavily on banks, so the strengthening or weakening of the banking system has a direct impact on our national economy.

That is to say, banks, as financial institutions that their services play a decisive role in a society in the circulation of money and wealth, have a special place in the economy of each country. The positive and effective activity of banks could have important effects on the growth of economic sectors and the promotion of products in each sector or in flourishing of economic fields. In today's world, most of the money transactions are carried out by banks; facilitating people's affairs, as well as administration of economic affairs of the countries, require banks to operate.

Although the insurance industry does not have the same role as the banking industry in Iran's economy, its relationship with other sectors of the economy such as services, industry, and the banking sectors, is increasing more and over time, playing a further effective role in the Iranian economy. Insurance companies and in total insurance industry in each country, are among the most important financial institutions active in the financial markets, especially in the

capital market, which, in addition to securing business activities, can play a crucial role in the dynamics and mobility of financial markets and the provision of funds investible in economic activities by providing insurance services. Of course, it is worth noting that the limited structure of the Iranian monetary and financial markets and the existing investment restrictions have hindered the necessary and sufficient growth in the country by insurance industry.

In general, it can be argued that in order to increase the GDP and allocate appropriate wealth, we should witness the development of investments in different sectors of the economy, and this will be achieved with broader activities of banks, insurance companies and stock exchanges. In addition, in the bank-driven economy of Iran, a large portion of total liquidity is managed by banks and insurance companies, and almost every year, banks are at the top of the list of the top 100 companies in the country in terms of various indices such as income (sales). Therefore, their performance directly affects the interests of stockholders, depositors, clients, customers, and all other economic entities of the country. Therefore, it is necessary to assess the performance and efficiency of banks and insurance companies and determine the factors affecting them. In this regard, the present study evaluates their performance and efficiency of financial and insurance institutions due to their prominent role in the country's economy. In other words, this research intends to analyze the factors and components affecting performance and returns of the listed financial and insurance institutions, using the relevant data between 2009 and 2016.

## **2. Theoretical Basis of the research subject**

### **2.1. The concept of capital adequacy**

Proper and sufficient capital is one of the essential conditions to maintain the health of a banking system, and each of the banks and credit institutions must always maintain a pertinent trade-off between capital and risk in their assets in order to ensure the stability and sustainability of its activities. The main function of this ratio is to support the bank against unexpected losses and protect depositors and creditors. Because of the protection that this ratio contributes to the losses incurred, maintaining sufficient capital and in line with the existing risks is the main source of the public confidence in every bank, in

particular, and in the banking system, in general. In this regard, the necessity has been emphasized in the monetary and banking law of the country, and Article 14 of this law explicitly refers to the same ratio of capital to various types of assets.

The ratio of capital adequacy is one of the most important financial indicators used to assess the performance of banks and credit institutions. Capital adequacy is based on the definition given in the capital adequacy regulation, resulting from the division of the base asset into the sum of the assets allocated to the risk factors in percentage terms. Bank capital and assets are two main components of determining the capital adequacy of a bank.

$$\text{Capital adequacy ratio} = \frac{\text{base capital}}{\text{Risk whighted assets}}$$

This ratio was first introduced in 1988 by the Basel Committee to the world's banks. The Basel Committee then proposed a set of minimum capital terms to banks, which later became known as the Basel Peace Agreement. The ratio of capital adequacy is one of the ratios for measuring the healthy performance and financial stability of the financial institution and banks. Banks must have sufficient capital to cover the risks arising from their activities and ensure that losses incurred, are not transferred to the depositors. Therefore, they should have the minimum amount of capital to cover their operating risks. The minimum ratio of capital adequacy for all banks and credit institutions (both public and non-governmental) is set at 8%. The Central Bank of the Islamic Republic of Iran, in cases where international standards or the need to preserve the health of banks and credit institutions require, may set a higher ceiling for all or some of the banks and credit institutions.

## **2.2.Solvency margin in insurance companies**

The concept of solvency margin is the financial capability of an insurance institution to cover the risks of an institution. Solvency margin is derived from the division of the existing capital into required amount of capital. Existing capital consists of acceptable assets plus surplus value of the day relative to the book value of assets, minus debts of the insurance institution. Capital adequacy is also referred to the minimum capital that an insurance institution must have in order to cover the risks it is exposed to. The solvency margin of insurance companies is determined in the following five levels:

**Level 1:** The amount of the solvency margin of the insurance company is equal to 100% and more.

**Level 2:** The amount of solvency margin of the insurance institution is equal to or greater than 70% and less than 100%.

**Level 3:** The amount of the solvency margin of the insurance institution is equal to or greater than 50% and less than 70%.

**Level 4:** The amount of the solvency margin of the insurance institution is equal to or greater than 10% and less than 50%.

**Level 5:** The amount of the solvency margin of the insurance company is less than 10%.

### **3.Literature**

Various studies have been carried out on the factors affecting the returns and performance of financial and insurance institutions, both inside and outside the country. These studies include:

In a paper titled "Internal Factors Affecting the Profitability of Bank Branches, A Case Study: Parsian Bank's Branches in Tehran Province", Chavoshi and et al (2014) studied the effect of internal factors affecting the profitability of Parsian Bank's branches in Tehran province. The statistical population of this research includes all 60 branches of Parsian Bank in Tehran province and the time domain of the years 2008 to 2013. The required data of this research have been extracted through a questionnaire and financial statements of Parsian Bank's Branches in Tehran Province. In this study, the profitability was the dependent variable and the variables of the amount of deposits, the amount of rendered facilities, liquidity management indicators and cost management were independent variables of the research. According to the results of this research, variables such as cost management and rendered facilities in comparison to other variables, have a very positive and significant relationship with profitability variable.

Kiani (2014), in his master's thesis entitled "Influence of Information and Communication Technology (ICT) on the Profitability of Selected Banks of Iran", has reviewed the effect of ICT (including ATM, sales terminal and branch terminals) on the profitability of the selected banks in Iran. The model includes the dependent variable of the bank's return on assets and explanatory variables (concentration ratio, bank size, market share of each bank, branch

terminals, sales terminal and ATM). This analysis is done on the basis of the unbalanced panel data of the 13 selected banks of the country (Egtesad novin, Parsian, Tejarat, Refah kargaran, Saman, Sepah, Sarmaye, Sina, Saderat, Industry and Mine, Karafarin, Mellat, and National Bank) in the form of a Econometric Model with fixed effect during the period 2002-2009. The results indicate that ICT has a positive impact on the performance of Iranian banks.

Ranjbar et al. (2015), in a paper titled "Investigating Factors Affecting the Efficiency of the Iranian Banking System Using the Combined Data Approach", estimated the efficiency of sixteen state and private banks, determined internal and external factors affecting the efficiency of banks using the data envelopment analysis model. According to the results, the average efficiency of banks in the period under review is 83% and according to the results of the random effects model, there is a negative and significant relationship with the variables of credit risk factor, per capita share (branch) in the deposit market and a positive and significant relationship with the number of ATMs, the consumer price index and the virtual variables of the specialized and private banks.

Ezati et al. (2016), in a paper titled "Factors Affecting the Profitability of Islamic Banks (OIC)", used the profit margin indicator to identify the most important factors affecting the profitability of Islamic banks. The data of this study are from 29 Islamic banks in 10 OIC member countries, which have been compiled in a documentary way for the period 2004-2011. These data are analyzed in a data panel econometric method (combined data). The findings show that among the 11 variables used, the average annual exchange rate has a positive, strong, and significant effect on the profit margin. Also, the ratio of facilities to the received deposit has shown a positive, strong and significant effect on the margin of the bank's profit.

Akhise et al. (2015) examined the impact of electronic banking on the return on equity of banks in 23 countries, including developing and developed countries, in the period 2005-2013, using the dynamic data panel method. In this study, the performance of the bank was examined for profitability, and equity return was considered as an indicator of profitability. The results show that the effect of electronic banking on the profitability of all studied countries is significant. The effect of the number of sales terminals and the number of electronic banking users on the profitability is negative, while the number of cards issued and the ratio of the number of ATMs to the number of branches

had a positive and significant effect on the profitability. Also, among independent variables, the number of ATMs in the number of branches has the highest coefficient.

Peteria et al. (2015), in their paper titled "Determining Bank Profitability: Evidence from the European Banking System," divided the factors affecting profitability into two groups: internal factors (interorganization) and external factors (macroeconomics). Profitability Indices used in this study, are return on equity and total return on assets. Factors affecting the profitability of the banks examined in this study, which were performed using the panel data model for the period 2004-2011, include bank size, financial structure, credit risk from liquidity, cost structure and capital adequacy ratios along with two external factors of economic growth and inflation. The results of this study showed that the degree of concentration of the bank shown with the Herfindahl-Hirschman Index does not have a significant effect on equity returns. The ratio of cost to income and credit risk has a negative and significant effect on both indicators of profitability. Although the capital adequacy ratio has a positive and significant effect on the return on assets, it does not affect the return on equity and finally, as expected, GDP (as an indicator of economic growth) has a positive and significant effect on profitability, but inflation on profitability is ineffective in this study.

Sanli and Hobikoglu (2015), in their paper titled "Internet Banking Development as a New Channel of Distribution," reviewed the effects of electronic banking on customer responses and the effectiveness of the Turkish banks. The results of their research for the period 2012-2014 showed that despite the rapid expansion of electronic banking in this period, the number of products and services provided by Internet banking, as well as the number of Internet banking customers in Turkish banks in the world has not yet reached a satisfactory level, compared to other countries. Therefore, they recommend that compatibility between Internet infrastructure and Internet banking, as well as the creation of a sense of security for customers of Internet banking, be placed in the programs of the Turkish banks. leading to the development of Internet banking in the country.

#### **4. Research modeling**

In this research, two separate models are estimated and therefore, we will have two dependent variables. These two dependent variables are capital adequacy index and asset return rate; an indicator used to evaluate the performance of insurance companies is the capital adequacy index. This ratio is the result of dividing base capital by the sum of the adjusted assets to the risk factors in percentage terms. To measure the factors affecting the performance of banks, the return on assets is used as an associated variable.

$$ROA_{it} = \alpha_i + \beta_1 Lev_{it} + \beta_2 Cred_{it} + \beta_3 Gov_{it} + \beta_4 Size_{it} + \beta_5 CR_{it} + \varepsilon_{it}$$

$$CA_{it} = \alpha_i + \beta_1 Lev_{it} + \beta_2 Cred_{it} + \beta_3 Gov_{it} + \beta_4 Size_{it} + \beta_5 CR_{it} + \varepsilon_{it}$$

In which,  $ROA_{it}$  the return on assets,  $Lev_{it}$  the financial leverage,  $CA_{it}$  the ratio of capital adequacy,  $CR_{it}$  the ratio of concentration (total assets of an insurance company to the total assets of all institutions in that country),  $Cred_{it}$  credit risk (ratio of loans or amounts of deferred premiums on total loans or insurance),  $Gov_{it}$  the volume of state ownership (the percentage of the state's share of the institutions) and  $Size_{it}$  the size of the financial institution and insurance (the logarithm of their total assets). The statistical population of this study is all financial and insurance institutions listed in Tehran Stock Exchange.

Sampling method is also a simple random method, and companies in the sample are considered if they have the following conditions:

- The financial information of the company is available for the research period.
- Their financial year will end in March.
- Before 2009, they must have been listed in the Exchange.

By applying these conditions, 18 banks, financial institutions and insurance companies are selected as the sample and their information is collected during the period of 2009-2016. The information gathering tool is also a snippet of books and related articles; data and information from companies have been extracted from the Rahavard Novin software, Codal website, and the financial statements of financial and insurance companies.

## 5. Model Estimation and Analysis of Results



Initially, for estimating the model, using the jarque-bera test, the normal distribution of variables of the research is examined. When evaluating the normality of data, we test the zero assumption based on the normal distribution of data at a 5% error rate. Therefore, if the test statistic is greater than 0.05, then there is no reason to reject the zero assumption,i.e. data is normal. In other words, the distribution of data will be normal. The jarque-bera is calculated as follows, in which K is the elongation factor, N is the number of observations, and S is the slope coefficient

$$JB = \frac{N}{6} (S^2 + \frac{(K-3)^2}{4})$$

Under the zero assumption of this test,jarque-beratest statistic is for the chi-2 distribution with a degree of freedom( $\chi^2_2$ ).The jarque-bera results are reported in Table 1 and based on these results, the variables of the research have a normal distribution.

**Table1 :Variable'sNormalityTest**

Leverage	Size	Government ownership	Credit risk	Concentration ratio	Capital adequacy	Return on asset	
126	126	126	126	126	126	126	Observations
405.3	271.7	360.1	103.6	328.5	169.7	423.2	Jarque Bera
0.86*	0.53*	0.8*	0.28*	0.72*	0.41*	0.92*	Prob

**\*:The variables have a normal distribution at a significant level5% .**

Based on the results of Table 1, the variables have a normal distribution model. Because, according to the Jarque- Bera statistics, we cannot, at a significant level of 5%, reject the zero assumption that the variables are normalized. In the following part, the unit root test is used to examine the variables stationary property. To do this, several tests have been developed in Eviews software. In this section, augmented Dickey Fuller test is used and its results for all variables included in the model are reported in Table 2.

**Table2 :unitroottestresults**

Situation	variable	level	result
Intercept and trend	Return on asset	57.6 (0.00)*	I(0)

Intercept and trend	Capital adequacy	72.5 (0.00)*	I(0)
Intercept and trend	Concentration ratio	63.8 (0.00)*	I(0)
Intercept and trend	Credit risk	62.9 (0.00)*	I(0)
Intercept and trend	Government ownership	54.4 (0.00)*	I(0)
Intercept and trend	size	52.9 (0.00)*	I(0)
Intercept and trend	leverage	49.8 (0.02)*	I(0)

**Rejecting the zero hypothesis about the existence of unit root at a significant level of 5%**

**Source: Research findings**

It can be seen that all variables of the model are stationary. In other words, the variables of the model has not root unit, and are accumulated zero degree.

### 5.1. Estimation of factors affecting the returns of banks

Model 1 is used to estimate the factors affecting the return of banks. Based on the nature of the data, this model can be estimated as a data pool or data panel. To determine this, the F Leamer test is used. In fact, the test statistic used to determine the existence or absence of a separate origin for each company. The zero hypothesis states that  $\alpha_i$  are the same for all companies and that a joint effect model can be used. So you can write:

$$H_0 : \alpha_1 = \alpha_2 = \dots = \alpha_n = \alpha$$

$$H_1 : \alpha_i \neq \alpha_j$$

The zero assumption of this test is the estimation of the model as a pooled. Therefore, if the amount of F calculated from the value of Table F is at a level of 5% and even one percent higher, then the zero hypotheses is rejected and the effects of the companies are accepted. In other words, the model of static effects cannot be rejected against the model of joint effects. To do this, first we estimate the model as a fixed effect, and then perform the test of the loss of fixed effects. This test is done in Eviews software and its results are presented in Table 3.

Now, in the second step, it is necessary to determine which method (fixed effects or random effects) is appropriate for estimating the data panel model. For this, the Hausman test (1980) is used. In Hausman's test, the zero

hypothesis means that there is no relation between the disturbance of the equation and the explanatory variables, and are in fact independent of each other. However, the opposite hypothesis means that there is a correlation between disturbance term and explanatory variables. The results of this test are also reported in Table 3.

**Table 3 : Results of Leamer and Hausman tests**

result	Prob	Test statistic	test
The panel data is validated against the pooled Data	0.00	12.3	Leamer test
The fixed effect is validated against the random effect.	0.00	117.8	Hausman test

Source: Research calculations

As can be seen, in this study, based on the Leamer F test statistics, the model can be estimated as a data panel. Also, Housmantest statistic also shows that in the model, the method of estimating random effects has to be rejected and the final model is estimated as constant effects. Hence, Model No. 1 is estimated using the data panel method as a fixed effect and its results are reported in Table 4. The results of this study show that,

**Table 4 : Estimation results (dependent variable : return on asset)**

variable	T statistic
intercept	3.1 (0.11)
Concentration ratio	0.26 (0.04)*
Credit risk	-0.18 (0.01)*
Government ownership	-0.23 (0.17)
Size	0.31 (0.04)*
Leverage	0.16 (0.04)*
Adjusted r <sup>2</sup>	0.82
R <sup>2</sup>	0.86
DW	1.89

Indicates a rejection of the zero hypotheses and the significance of the coefficients at a significant level of 5%.

Source: Research findings

Theoretically, it is expected that there will be a positive relationship between the performance, the returns, and the size of the banks. Because it will increase their market power and, subsequently, will increase customer attraction and profitability and returns. Based on the results of Table 4, at a significant level of 5%, the size of banks has a positive impact on its returns and this effect is statistically significant. Risk is another factor affecting the efficiency and performance of banks. Risks are expected to have a negative effect on the returns and performance of banks. Because the more deferred and unpaid loans are, the more funds are withdrawn from the investment and crediting cycle of these institutions, which has a negative impact on their returns and performance. In this study, the risk variable has a negative effect on banks' returns and this effect is statistically significant at a significant level of 5%. The concentration ratio is also one of the other factors, which affects the returns of banks. This variable is expected to have positive effects on the returns and performance of banks. In this study, the ratio of concentration is expected and it has a significant effect on banks' returns at a significant level of 5%. Banks' governmental ownership is another factor that affects their returns and performance. In other words, the greater the government's share of the banks, the more likely it is to reduce its efficiency and performance. Because private banks operate more efficiently in comparison with state-owned banks, they are using new tools to provide new banking services. In this study, the volume of government ownership has a negative effect on banks' returns, but this effect is not statistically significant at a significant level of 5%. Based on the estimated results, financial leverage has a positive effect on banks' returns and this effect is statistically significant at a significant level of 5%. Also, the coefficient of estimating the estimated model is 0.86, indicating that approximately 86% of the variations in the dependent variable are explained by the independent variables envisaged in the model.

## **5.2. Estimation of effective factors on the efficiency of insurance companies**

Model 2 is used to estimate the factors affecting the returns of insurance companies. Model number 2 can also be used as a pooling data or data panel. To determine this, the F test is used. Also, to determine the appropriate method

for estimating the data panel model (fixed effects or random effects), the Hausman test is used. The results of both tests are reported in Table 5. As can be seen, the model is based on the F test as a panel data and the Hausman test statistic also shows that the model should be considered as a fixed effect.

**Table 5: Results of the Leamer and Hausman tests**

result	prob	Test statistic	test
The panel data is validated against the pooled Data	0.00	17.6	Leamer test
The fixed effect is validated against the random effect.	0.00	102.2	Hausman test

Source: Research calculations

By estimating the second model as a data panel, we will have fixed effects.

**Table 6: Results of model estimation (dependent variable: capital adequacy ratio)**

Variable	T statistic
Intercept	2.29 (0.18)
Concentration ratio	0.14 (0.05)*
Credit risk	-0.27 (0.04)*
Government ownership	-0.19 (0.04)*
Size	0.31 (0.04)*
Leverage	0.11 (0.01)*
Adjusted r <sup>2</sup>	0.78
R <sup>2</sup>	0.83
DW	1.95

\* Indicates a rejection of the null hypothesis and significance of the coefficients at a significant level of 5%.

Source: Research findings

Based on the results of the model estimation, it is observed that at a significant level of 5%, the size of insurance companies has a positive effect on their performance and this effect is statistically significant. The effect of credit risk on the performance of insurance companies is negative and this effect is statistically significant at a significant level of 5%. In this model, the volume

of state ownership has a negative impact on the performance of insurance companies. Contrary to the previous model, this negative effect is statistically significant at a significant level of 5%. Also, the effect of the concentration ratio on the performance of insurance companies is positive and at a significant level of 5% is statistically significant. Based on the estimated results, financial leverage has a positive effect on the performance of insurance companies and this effect is statistically significant at a significant level of 5%. In other words, the high leverage of the insurance companies studied has also increased the ratio of their capital adequacy. The coefficient of estimating the estimation model is 0.83, and the figure is appropriate and acceptable, and shows that approximately 83% of the variations in the dependent variable are explained by independent variables included in the model.

## **6. Conclusion**

In today's world, most of money transactions are carried out by banks, and the administration of people's affairs, as well as the organization of economic affairs of the countries require the banks to operate. Although the insurance industry does not have the same role as the banking industry in Iran's economy, its relationship with other sectors of the economy such as services, industry and the banking sector is increasing more and over time, and therefore plays a more effective role in the Iranian economy. Insurance companies and in total the insurance industry, in each country are among the most important financial institutions active in the financial markets, especially the capital market, which, in addition to securing business activities, can play a crucial role in the dynamics and mobility of financial markets and the provision of funds that can be invested in economic activities, by providing insurance services. In this research, the efficiency and effectiveness of financial and insurance institutions and the factors influencing it were studied. To do this, the factors influencing the returns and performance of financial and insurance institutions listed in Tehran Stock Exchange are modeled and the models are estimated using the data panel method using Eviews9.0 software. The statistical population of this study was all active financial and insurance institutions in Tehran Stock Exchange. In sampling, the companies were included which had some

conditions. By applying these conditions, 18 banks, financial institutions and insurance companies were selected as samples and their information was collected during the period of 2009-2016.

Of course, before model estimation, by using the Dickey Fuller unit root tests, the static variables of the model were examined. Based on the results of the Dickey Fuller test, all variables are durable and have no unit root. Also, by using the Jarque- Bera test, normal distribution of variables was studied and at a significant level of 5%, the normal distribution of data was accepted.

As mentioned, in this study two separate models were estimated to study the factors affecting the returns and performance of financial and insurance institutions. In both models, based on F Leamer test results, the research models were estimated as data panels. Also, Hausman test statistic showed that the studied models should be estimated as fixed effects. Hence, each of the two research models was estimated by using the data panel method as a constant effect.

Results of the first model estimation (bank return) showed that at a significant level of 5%, banks size (logarithms of total bank assets) had a positive effect on its returns and this effect was statistically significant. The risk variable also has a negative effect on banks' returns and this effect is statistically significant at a significant level of 5%. Also, at a significant level of 5%, the ratio of concentration has a positive and significant effect on banks' returns. In this model, the volume of government ownership has a negative effect on banks' returns, but this effect is not statistically significant at a significant level of 5%. Based on the estimated results, financial leverage has a positive effect on banks' returns and this effect is statistically significant at a significant level of 5%. In the first model, the coefficient of estimating the estimation model is 0.86, indicating that approximately 86% of the variations in the dependent variable are explained by the independent variables envisaged in the model.

Results of estimating the second model (the productivity of insurance companies) showed that at a significant level of 5%, the size of insurance companies had a positive effect on their performance and this effect was statistically significant. The effect of credit risk on the performance of insurance companies is negative and this effect is statistically significant at a significant level of 5%. In this model, the volume of governmental ownership has a negative impact on the performance of insurance companies. Contrary to

the previous model, this negative effect is statistically significant at a significant level of 5%. Also, the effect of the concentration ratio on the performance of insurance companies is positive and at a significant level of 5%; it is statistically significant. Based on the estimated results, financial leverage has a positive effect on the performance of insurance companies and this effect is statistically significant at a significant level of 5%. In the second model, the coefficient of determination of the estimated model is also 0.83 and shows that approximately 83% of the variations in the dependent variable are explained by the independent variables included in the model.

According to the research results, the following suggestions can be presented:

1. According to the research results, credit risk has a negative and significant effect on the performance and returns of financial and insurance institutions. Hence, financial and insurance institutions should minimize the volume of unpaid loans and unearned premiums by validating customers and evaluating carefully before lending and providing insurance services. This will increase the efficiency and effectiveness of financial and insurance institutions.
2. The volume of governmental ownership financial and insurance institutions has a negative impact on their performance and returns. Therefore, in view of the high efficiency of the private sector in comparison with the public sector, as well as in implementing the policies of the Article 44, as far as possible, the subject of privatization of financial and insurance institutions should be on the agenda.



## References

1. Asadzadeh, A., and Kiani, H. (2012), "The Effect of Using ATMs, Sales points and Branches number on the Profitability of Selected Banks in Iran," Quarterly Journal of new Economy and trade, No. 29 and 30, pp. 181-206.
2. Alvani et al. (2012), "Measuring Efficiency of Sepah Bank Branches and Determining Inefficiency Factors (Case Study in Tehran Province)", Journal of Public Administration, Vol. 4, No. 11, pp.1-18
3. Haj Amini, M. (1392), "Comparative Study of Effective Factors on the Profitability of governmental and Non-governmental Banks with Panel Data Approach during the Period 2006-20011", Islamic Azad University, Central Tehran Branch, Faculty of Economic Affairs, Master's Thesis
4. Falahi, F., and Dehghani, A. (2010), " Concentration, Advertising and Profitability in Iranian Industries: A Dynamic Panel Data Approach", Quarterly Journal of Economic Growth and Development Research, Vol. 1, No. 1, p. 9 -30
5. Morteza Beigi, M. (1392), "Investigating the Relationship between Strategic Financial Factors and Profitability of the Refah Bank", Islamic Azad University, Central Tehran Branch, Faculty of Management and Accounting, Master's thesis
6. Moghaddam Zanjani, M., and Piri, A.(2012), "Investigating the Effect of Macroeconomic Factors on the Profitability of Islamic Banks", Proceedings of the Special Issue of the 23rd Islamic Banking Conference.
7. Nouri Boroujerdi, P., Jalili, M., and Mardani, F. (2010), " The Effect of Concentration in the Banking Industry and other Factors on the Profitability of State Banks ", Monetary & Banking Researches, No. 6
8. Nabi, M., vafaï, S., and Eftekhari Shahi, J. (2009), "Comparative Study of Islamic Banking in Iran and Malesia (with Profitability Approach)", Proceedings of the Second International Conference on the Development of the Finance System in Iran, Center for Technology Studies, Sharif University of Technology
9. Valijan, Anoome (2013), "Investigating the Effect of Special Banking and Macroeconomic Variables on Profitability of Public and Private Banks in Iran", Islamic Azad University, Central Tehran Branch, Faculty of Economic Affairs, Master's Thesis
10. Akhise et al. (2015). Factors affecting the adoption of Internet banking in Tunisia: An integration theory of acceptance model and theory of planned behavior. Journal of High-Technology Management Research, 23, 1-14
11. Jalal-Karim, A., Hamdan, A. M. (2010). the impact of information technology on improving banking performance matrix: Jordanian banks as case study” European, Mediterranean & Middle Eastern Conference on Information Systems 2010 Abu Dhabi· UAE
12. Gujarati, D.(2003). Basic Econometrics. New York.
13. Meihami, B., Varmaghani, Z., & Meihami, H. (2013). The Effect of Using Electronic Banking on Profitability of Bank. Interdisciplinary Journal of Contemporary Research In Business, 1299- 1318.
14. Mishkin, F. (2003). Economics of Money, Banking and the Financial Market.
15. Moussu, C., & Petit-Romec, A. (2013). ROE in Banks: Myth and Reality. Financial Times, 1-32.
16. Olson, D., & Zoubi, T. (2011). Efficiency and bank profitability in MENA countries. Emerging Markets Review, 94- 110.

17. Peteria et al .(2015). The Impact of the Relational Plan on Adoption of Electronic Banking. Journal of Services Marketing, 20- 42.
18. Sharma.D.,(2012). Does Technology Lead to Better Financial Performance? A Study of Indian Commercial Banks . Managing Global Transitions, 10(1) , 3-28.
19. World Bank.(2012). World development Indicator (WDI)
20. International Monetary Fund. [www.data.imf.org](http://www.data.imf.org)