



## The Impacts of Financial Structure on Financial Performance of Banks listed in Tehran Stock Exchange: An Empirical Application

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### ABSTRACT

Financial structure is a combination of debt and equity and regards as one of the most important issues in banking industry. The purpose of financial structure decision is to create an appropriate combination of financing resources to minimize the cost of capital and thus maximize the company's market value. This study investigates the impacts of banks financial structure on their Returns (ROA and ROE). In addition, it investigates the moderating roles of corporate governance, financial constraints, capital intensity and size. This research is an applied descriptive correlational research. To test the hypotheses, unbalanced panel data is used. The financial data extracted from "Rah Avarde Novin" software and the database of "Tadbir Pardaz" company. The statistical population includes all banks listed on Tehran Stock Exchange during the years 2009 to 2016. The results indicate positive significant impacts of financial structure and the banks' ROA and ROE. Moreover, the results show that capital intensity and the size significantly moderate the relation between financial structure with ROA and ROE.

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## 1 Introduction

Banks are considered as one of the most important components of the financial system in many countries, and as financial intermediaries, they play an important role in achieving economic growth and development in each country. Due to the crisis of bank failures in the 1990s, financial structure and capital ratio of banks have become important topics in the field of banking. Banks with higher capital ratios are safer and more secure against economic crises and risks, and in particular economic conditions banks must increase their capital adequacy. In this situation, increased capital ratio can lead to a decrease in economic risk. Given the reliance of banks on their capital they withstand losses from non-repayment of credit facilities, unfavorable market conditions and operational constraints. In order to optimize their financial structure Banks should have sufficient knowledge of the different financial resources and costs that they have been incurred for its provision. Moreover, the calculation

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of the capital cost of each new financial resource to be presented to executives to make decisions about financing and directing banks to attract low-cost and low-risk resources are very important to maximize bank value. Financial structure is a combination of debt and equity. The relationship between financial structure and both credit risk and cost of capital creates a paradoxical interest in order to reduce the capital ratio and achieve greater returns or increase capital for coping with the default risk. Regarding the relationships between financial structure and financial risk and the cost of capital on the one hand and between financial structure and return and the value of banks on the other hand, financial managers try to reduce financial risk and default risk and increase profitability by applying financial structure according to the limits that exist in this field.

Accordingly, we must choose the optimal financial structure namely debt-to-equity ratio in such a way that the weighted average cost of capital is minimized. Optimal implementation of corporate governance in the banking system increases efficiency reduces financial risk and enhances stability. If the desired implementation of corporate governance is secured, provision of internal and external resources financing will be facilitated for banks so that lenders and investors' appetite and desire to finance banks grows. It also reduces the cost of capital rate for banks through risk reduction related to shareholders and depositors, and improves their operational performance and increase the intensity of resistance of the bank against economic shocks. Appropriate Implementation of corporate governance in the banking network could pave the implementation of corporate governance in other sectors of the economy. This research in order to help with decision making in setting financial structure, we deal with explaining the roles of corporate governance, financial limitations, Size and capital intensity on the relationship between financial structure and return on assets and return on equity of banks listed on the Tehran Stock Exchange. To achieve this goal, the next part of this article outlines theoretical Foundations and research history. In the third section conceptual models, hypotheses and variables are presented. The fourth section is dedicated to providing descriptive results and hypotheses test and finally summarizing and giving recommendations will be presented in the final section.

## 2 Literature Review

### 2.1 Capital Structure

Capital structure issue was first discussed by Modigliani and Miller [15]. They stated the theory of capital structure being irrelevant to the company value and firmly believed that the recognition and valuation of companies based on assets and how to finance them are not dependent on recognition of capital structure. Budgeting and financing decisions, which are of the most important areas of financial management decisions, must be taken in order to maximize corporate value and what plays a major role in capital budgeting decisions is the firm's cost of capital. Since the cost of capital is used as the discount rate of cash flows resulted by investment projects, accepting or rejecting investment projects is a function of cost of capital and its WACC, and WACC in turn is a function of its capital structure. It is expected that change in the combination of financing sources affect cost of capital and consequently the firm value (Brealey et al, [8]).

Capital structure is a general claim on company assets that includes publicly traded securities, bank debt, commercial debt, private equity, and so on, through ratios such as debt to total assets, salary ratios Equity holders are measured at the total assets and the debt-to-equity ratio. In this research, we explain two theories.

### 2.1.1 Balance Theory

The hierarchical theory of theories is related to the choice between debt and equity in capital structure. It is stated that what leads to the structure of capital is the need for companies to finance. To this end, the company initially focuses on domestic resources, and if the domestic resources do not meet the company's financial needs, then it will take risk-free or risk-averse debt risk and equity stocks, which, amongst the shares, Preferred shares preferred. This funding hierarchy occurs when the cost of issuing new securities over other costs and benefits of dividends and debt will increase (Myers, [17]).

### 2.1.2 Hierarchical Theory

According to static equilibrium theory, companies are looking for an optimal capital structure (debt ratio) to maximize company value. In this theory, companies are calling for a balance between the benefits and costs of debt issuance. Advantages of debt issuance can be the tax savings of interest (tax shield) and reduce the conflict of interests between shareholders and managers, and debt issuance costs may include potential bankruptcy costs and conflicts of interest between shareholders and creditors. The optimal equity structure (optimal debt ratio) of the benefits from the last debt amount covers only the costs incurred by it. (Fama et al., [11]) Bank financial resources are divided into two categories: debt and equity. The largest part of the bank's resources is the debt and it is funded through accepting deposits and borrowings. Another part is capital, which can be financed through both the issue of new shares and retained earnings. To determine the optimal financial structure of banks, it is essential to note the equation of the ratio of debt to market value of the bank. The optimal capital structure is the point at which the market value of the bank is at the peak because of that debt ratio. Bank value is as following:

*The real value of bank: The current value of tax shield-the current value of costs of fund shortage*

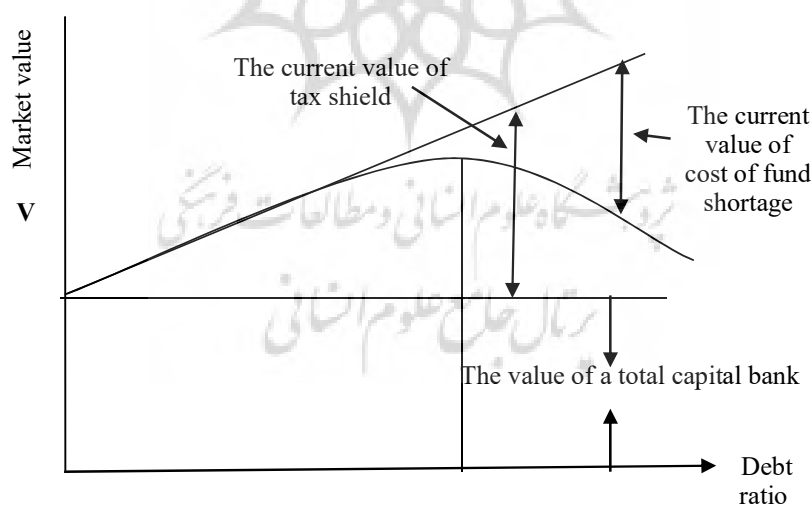


Figure 1: Optimal debt ratio <sup>1</sup>

<sup>1</sup> Sinki, 1984

## **2.2 Corporate Governance**

Each country has a unique set of corporate governance practices based on factors such as the legal framework, corporate structure and financial systems. The most commonly used model for categorizing corporate governance is the internal and external model. The difference between these two models is in the type of ownership structure and control of the company. The internal and external terms are used for both the range of corporate governance systems and, in fact, the corporate governance system is, in most cases, a combination of these two types. The most important theory that emphasizes corporate governance in financial markets, especially banks, is the theory of representation. According to this theory, the relationship between contract representation between stockholders and firm management is based on the theory of agency representation that ignores stockholding management for management control. Therefore, due to the separation of ownership from ethical risk management and bad choices, it may maximize its benefits to the interests of shareholders. On this basis, there should be a mechanism that takes into account the interests of the shareholders. Establishing proper corporate governance can eliminate conflicts of interest. The purpose of using corporate governance in banks is to increase security and financial sustainability and protect investors. By aligning the interests of managers and shareholders, corporate governance helps to reduce the problem of bank representation. In this study, we examine some of the indicators of corporate governance and their impact on the performance of the banks.

### **2.2.1 Independence of Board of Directors**

According to the theory of representation, the presence of non-executive directors and their supervisory functions as independent individuals reduces the conflict of interests between shareholders and corporate executives (Jensen & McLing, [14]). It is contended that a board of directors, most of which is independent and independent, is an appropriate control for opportunistic management behaviours. Independence of the non-executive directors can reduce internal pressure and positively affect the performance of the company. The presence of non-executive directors in the board increases the power of the board of directors as a control mechanism. Eventually, non-executive directors are less likely to manage with the expropriation of shareholders.

### **2.2.2 Board Size**

The size of the board as one of the board's functions includes the number of board members of the company. There are different opinions about the size of the board. Some believe in the effectiveness of the board of directors due to the extensive experience of members and the diverse expertise of the board of directors (Abdul Rahman and Ali, [1]). While, some believe in the effectiveness of the board of directors for the ease of cooperation, communication and decision making (Forbes and Milliken, [12]).

### **2.2.3 Major Shareholder**

The criterion of the presence of large shareholders in a company is the focus of ownership. It has been shown that a high ownership concentration provides sufficient incentives for large shareholders to oversee executives. Some experts believe that the presence of major shareholders in the company, on the one hand, strengthens the motives and oversight of the performance of managers, and on the other hand, sometimes due to the lack of compliance with the interests and goals of large shareholders with the interests and expectations of microfinance shareholders, the costs of control and Aligning the demands of the major shareholder with the interests of other shareholders (Wang, [22]).

## 2.3 Financial Constraints

Financial constraints are limitations that prevent the provision of all the funds needed for the desired investment of companies. In the event of a capital market imbalance, the resources of domestic and foreign funds can not completely replace each other (Arsalan, Fleurakis and Vasakan, [5]). It should be noted that the financing of companies by companies is not infinite, and companies have limited resource supply. Are financial. Companies with financial constraints have low and costly access to external financing sources. Firms face financial constraints when faced with a gap between internal and external spending allocations. In the following, we will examine some of the criteria for financial constraints.

### 2.3.1 The Size of Firm

The size of the company can have an influence on investment sensitivity of cash flows. Large companies face less trouble attracting investment. In big companies, creditors deal with less monitoring and agency cost. As a result, small companies compared to large companies have higher costs of external financing and more limited access to capital markets. To measure the natural logarithm, we applied the book value of the company's total assets (George et al, [13]).

### 2.3.2 Operating Cash Flow Ratio

Companies with a cash flow above the average cash flow of sample firms may have fewer financial constraints. (Caballero et al., [6])

### 2.3.3 Dividend Ratio

The firm that its dividend pay-out ratio is higher has less financial constraints and it also needs less cash reserves. (Arsalan et al, [5])

## 2.4 Research History

Amiri et al. [4] assessed the effect of corporate governance and financial constraints on the rate of cash Holdings at companies listed on the Stock Exchange. In the article, they examined the effect of some mechanisms of corporate governance (board independence, board size, board financial expertise, the existence of institutional investors and the concentration of ownership) and financial constraints on cash holdings at companies listed on the stock exchange in the Tehran stock Exchange. The results show that the impacts of board financial expertise, the existence of institutional shareholders, ownership concentration, as well as financial constraints on cash holdings is significant and positive at companies listed on the Tehran Stock Exchange, but the independence of the board and board size are ineffective on the level of cash holdings at companies listed on the Tehran Stock Exchange.

Rahimian et al. [18] examined the relationship between corporate governance and financial constraints at companies listed on the stock exchange during the period of 2007-11. The results showed that the number of major shareholders and board independence have significant incremental impact on financial constraints. Akbar et al. [2] investigated the relationship between corporate governance and corporate performance in the UK. The performance of this study was measured by the ROA variable and then examined the relationship between this variable and corporate governance and showed that there was a significant difference between the performance. There is no meaningful relationship between corporate governance and corporate governance.

In a research it is entitled that the dynamics of two-way leadership and the functional level of the company: modifying the role of the independence of the Board, concluded that the board had a negative effect on performance, and if the independence of the supervisory board and the board of directors was adjusted It will have a positive effect on the company's performance. It has been reviewed that the relationship between financial structure and financial performance. Short-term debt, long-term debt, accumulated profit and owner rights did not have a significant relationship with return on assets and returns on equity, but financial structure had a significant positive correlation with return on equity and had a significant negative relationship with return on assets. Singh et al. [20] investigated the relationship between corporate governance and the board's relationship with company growth. The results of the research show that there is a positive correlation between corporate governance and corporate growth and there is a meaningful relationship, and on the other hand, there is a significant relationship between the board of directors and the growth of the company. El Nasser Abdullah, Ismail [3] in a study titled Corporate Governance, Ownership Structure, and Corporate Performance in the Arab Cooperation Council of the Persian Gulf, whose model has a dependent variable of performance and an independent variable of corporate governance, has investigated the corporate governance from which the results of these researches, a positive and significant relationship between corporate governance and performance has been demonstrated. Among other results of this study is the involvement of the government in improving corporate governance.

### 3 Methodology

This research is a descriptive applied research. It is also a correlational study based on analysing the results obtained using the panel data. In order to gather the information, first research history and initial definitions are studied. In order to test the statistical hypotheses of the research, we used the financial data of "Rah Avarde Novin" software and the database of "Tadbir Pardaz" company. In addition, in some cases we also used www.rdis.com, the website belonging to an affiliated organization (the Canter for Research and Islamic Studies) of the Tehran Stock Exchange. The statistical population consists of all banks listed in TSE during the period of 2009-2016. In order to analyse the data, we used multivariate regression fixed effects estimators, random effects and Least. We applied E-views software to explain the roles of corporate governance, financial constraints, capital intensity and size on the relationship between financial structure with return on Asset and return on equity of banks listed on TSE.

### 4 Models and Variables

#### 4.1 Conceptual Model

The proposed conceptual model is as figure 2.

#### 4.2 Research Assumption

This study is based on the following research hypotheses:

Assumption 1: Corporate governance, financial constraints, capital intensity and firm size significantly moderate the relationship between financial structure and return on assets (of banks listed on the TSE).

Assumption 2: Corporate governance, financial constraints, capital intensity and firm size significantly moderate the relationship between financial structure and return on equity (of banks listed on the TSE).

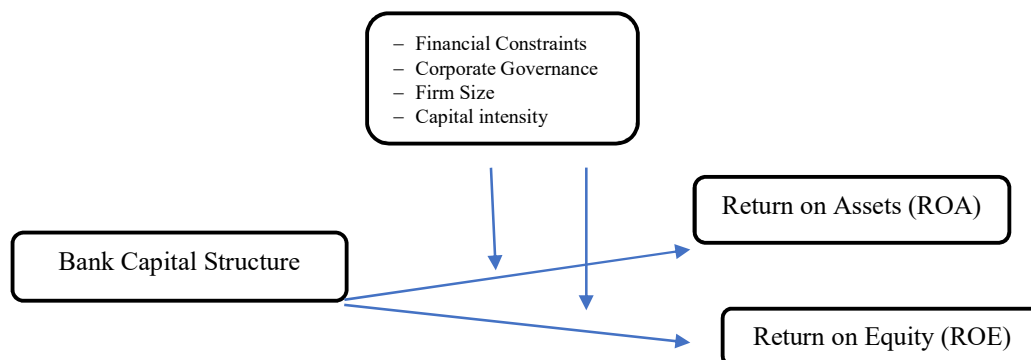


Figure 2: The proposed conceptual model

### 4.3 Research Variables

In this study, the independent variable, dependent variables, and moderating variables are as follows:

- Dependent variables: In this study, we used two dependent variables to express the bank's financial performance; 1) return on assets, and 2) return on equity.
- Independent variable: Independent variables are financial structure of the banks, which is the ratio of debt to equity.

Moderating variables: Moderating variables include

- o Seven variables indicating the features of corporate governance of banks (size of the board, size of major shareholders, the board's financial independence, financial expertise of the board, tenure of the board of directors, the duality of CEO and chairman duties, and the control and audit structure)
- o Three variables which indicate financial constraints (dividend ratio, operating cash flow, and sales growth)
- o Two variables indicating the size and the intensity of capital

Variables indicating corporate governance features are:

- *Board size*: Measured by the natural logarithm of the number of board members.
- *Size of major shareholders*: Measured by the percentage of stock ownership by shareholders who hold more than 5% of the company's shares.

- *Independence of the board*: Measured by the proportion of non-executive members to the total number of board members.
- *Financial expertise of the board*: Measured by the ratio of the number of board members with financial expertise to the total number of board members.
- *Board of director's tenure*: Measured by the natural logarithm of years' members have been present at the board of directors.
- *Duality of CEO and chairman duties*: Measured by a binary dummy variable. It becomes one if the CEO is the chairman of the board of directors at the same time and takes zero otherwise.
- *Control and audit structure*: Measured by a binary dummy variable. It becomes one if there is an audit and a risk committee, and it becomes zero otherwise.

Variables, which indicate financial constraints:

- *Dividend ratio*: Measured by dividing the profit distributed to the total earnings in year  $t$ .
- *Operating cash flow*: Operating cash flow in year  $t$  divided to the value of assets at the beginning of the period.
- *Sales growth*: Measured by dividing sales value in year  $t$  to the value of assets at beginning of the period.

Other variables:

- *Firm size*: Measured by the natural logarithm of the value of the total assets.
- *Capital intensity*: Measured by dividing the value of fixed assets to the total assets.

The statistical models are:

$$ROA_{it} = \alpha_0 + \beta_1 FS_{it} + \beta_2 BSize_{it} + \beta_3 MSS_{it} + \beta_4 INDEP_{it} + \beta_5 SCIENCE_{it} + \beta_6 AGE_{it} + \beta_7 DUA_{it} + \beta_8 CONT + \beta_9 DP + \beta_{10} CFO + \beta_{11} GS + \beta_{12} Log FSIZE + \beta_{13} CI + \varepsilon_{it} \quad (1)$$

$$ROE_{it} = \alpha_0 + \beta_1 FS_{it} + \beta_2 BSize_{it} + \beta_3 MSS_{it} + \beta_4 INDEP_{it} + \beta_5 SCIENCE_{it} + \beta_6 AGE_{it} + \beta_7 DUA_{it} + \beta_8 CONT + \beta_9 DP + \beta_{10} CFO + \beta_{11} GS + \beta_{12} Log FSIZE + \beta_{13} CI + \varepsilon_{it} \quad (2)$$

Where:

*ROA*: Return on assets

*ROE*: Return on equity

*FS*: Financial structure

*BSize*: Board size

*MSS*: Size of major shareholders

*INDEP*: Independence of board of directors

*SCIN*: Financial expertise of the board of directors

*AGE*: board of directors' tenure

*DUA*: Duality of duties

*CONT*: Control and audit structure

*DP*: Dividend ratio

*OCF*: Operating cash flow

*GS*: Sales growth



*FSIZE*: Firm size

*CI*: Capital intensity

## 5 Main Results

Table 1 illustrates the mean, median, maximum, minimum, and standard deviation of variables. Because the data used in this research is secondary and quantitative data, collected from the sites linked to the Stock Exchange and prepared according to the standards of that organization, their validity is confirmed. The static data of the combination of root unit tests are used to measure the static.

H0= There is a unit root and the variable is no stationary.

H1= There is no unit root and the variable is stationary.

To reject the null hypothesis, the level of significance is less than 0.05. As seen in the Table above, level of the significance in all cases is less than 0.05. Therefore, the stationary of all variables

**Table 1:** Descriptive Statistics of Research Variables

Criteria	Average	Median	Maximum	Minimum	Deviation
ROA	0.015544	0.01	0.08	-0.02	0.015489
ROE	0.154313	0.16	0.45	-0.6	0.130016
SCIN	0.53837	0.571429	1	0	0.207538
DP	0.011029	0.007	0.06	-0.003	0.012615
FSIZE	8.080200	8.117580	9.247677	6.534169	0.638233
GS	0.112159	0.07	0.69	-0.02	0.107461
INDEP	0.375737	0.4	0.8	0	0.267170
MSS	0.436855	0.40005	1	0	0.292126
DUA	0.934426	1	1	0	0.248556
AGE	1.842537	1.7918	2.6391	0	0.48332729
BSIZE	0.736636	0.698970	1	0.477121	0.09284704
CFO	0.052455	0.02	1.23	-0.94	0.198334
CONT	0.852459	1	1	0	0.356107
CS	0.881667	0.93	0.98	0.2	0.137432

examined is confirmed.

**Table 2:** Unit Root Test Results

Variables	Test statistic Levin, Lin & Chu t*	Significance level
AGE	-2.97	0.001
BSIZE	-8.13	0.000
FSIZE	-7.61	0.000
INDEP	-8.82	0.000
MSS	-2.35	0.009
SCIEN	-10.05	0.000
CFO	-27.42	0.000
CS	-10.57	0.000
DP	-7.71	0.000
GS	-12.18	0.000
CI	-8.32	0.000
ROA	-17.47	0.000
ROE	-12.93	0.000

### 5.1 Correlation Test of Research Variables

If the research variables are of a proportional and continuous scale, Pearson correlation coefficient is used to examine the correlation between them. The zero assumption in the correlation test is based on the non-significant correlation between the variables under study and the hypotheses can be written as follows:

H0= There is no significant correlation between the variables studied.

H1= There is a significant correlation between the variables studied.

To reject the null hypothesis and confirm the significance of correlation, the significance level should be less than 0.05.

**Table 3:** Correlation Coefficient between Research Variables

Correlation Probability	AGE	BSIZE	CFO	CI	CONT	CS	DP	DUA	FSIZE	GS	INDEPEND	MSS	SIENC
AGE	1.000000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
BSIZE	0.355010	1.000000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CFO	-0.033496	0.011600	1.000000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
CI	-0.371314	-0.124251	-0.111277	1.000000	-----	-----	-----	-----	-----	-----	-----	-----	-----
CONT	0.058455	-0.046310	-0.020283	0.091732	1.000000	-----	-----	-----	-----	-----	-----	-----	-----
CS	0.209392	0.046448	-0.135009	-0.365789	0.129765	1.000000	-----	-----	-----	-----	-----	-----	-----
DP	0.002125	0.098433	0.348235	0.064476	-0.087760	-0.168674	1.000000	-----	-----	-----	-----	-----	-----
DUA	0.9815	0.2807	0.0001	0.4805	0.3364	0.0633	-----	1.000000	-----	-----	-----	-----	-----
FSIZE	-0.070176	0.148638	-0.008337	0.189748	0.263274	-0.101923	0.031852	1.000000	-----	-----	-----	-----	-----
GS	0.365058	-0.023180	-0.155018	-0.380080	0.209729	0.570821	-0.215934	-0.066572	1.000000	-----	-----	-----	-----
INDEPEND	0.0000	0.7999	0.0882	0.0000	0.0204	0.0000	0.0799	0.4656	-----	1.000000	-----	-----	-----
MSS	-0.033785	-0.023275	0.180978	0.075489	-0.015901	-0.108281	0.315409	0.137960	-0.257941	1.000000	-----	-----	-----
SIENC	0.0049	0.0000	0.5952	0.0652	0.5783	0.5541	0.5888	0.0017	0.0002	0.5770	1.000000	-----	-----
	0.176586	-0.030332	-0.105610	-0.020672	-0.013365	0.286066	-0.099896	0.049170	0.184091	0.013351	-0.169743	0.081701	1.000000
	0.0517	0.7401	0.2470	0.7382	0.8838	0.0014	0.2738	0.5907	0.0424	0.8840	0.0616	0.4996	-----

In the Table 3, the correlation coefficient in the first line and the correlation significance are written in the second line. If the significance is less than 0.05, the correlation is statistically significant. As seen in some cases, the correlations between the independent variables are significant, but the intensity of the correlations is less than the probability of the existence of coherence in the model.

## 5.2 Pre-estimate Tests

The Chow test is used to determine whether the panel method is more efficient in estimating the model or the combined data method. The zero assumption in the Chow test (F Lemmer) is based on the non-use of the data panel (i.e., the use of compilation data) and hypotheses can be written:

H0= It cannot use the data panel method to estimate

H1= It can be used to estimate the data panel method.

**Table 4:** Chow Test Results for Regression Models

Models	Significance level	Degrees of freedom	Test statistic
Model 1	0.000	(17 and 91)	8.59
Model 2	0.000	(17 and 91)	5.46

As it is seen in the Table 4, the significance level of the Chow test in all four of the studied equations is less than  $\alpha = 0.05$ . So with 95% confidence, the possibility of estimating models is confirmed using the panel method.

## 5.3 Fixed or Random Effects Test

Given that the zero assumption of the Chow test on the width equalization of the originals was rejected, the Hausman test is used to determine whether there are fixed effects or the presence of random effects. The zero assumption in the Hausman test is based on the non-use of the fixed effects method (i.e., the use of the method of random effects), and the hypotheses can be written as follows:

H0= It cannot be used to estimate the static effects model in the data panel method (we must use the random effects model in the data panel method).

H1= It can be used to estimate the constant effects model in the data panel method.

**Table 5:** Hausman Test Results for Regression Models

Models	Significance level	Degrees of freedom	Test statistic
Model 1	1.000	13	0.000
Model 2	1.000	13	0.000

As it is seen in the Table 5, the significance level of the Hausman test is calculated for all four equations larger than 0.05, but this value is exactly zero, and the Hunsman test does not have the ability to distinguish between the use of constant and random effects. Therefore, Hausman's test in these four estimation equations gives rise to the use of static effects.

## 5.4 The First Assumption Test

The first research hypothesis suggests that corporate governance, financial constraints, capital intensity and size significantly influence the relationship between financial structure and return on assets of banks listed on the TSE. The result of model estimation for the first hypothesis was tested us-

ing diagnostic tests. It showed that in terms of the number of significant items, coefficient of determination, normal distribution of residual components, heterogeneity of variance, correlation, Durbin - Watson and generally being significance the model is approved. Table 6 provides the results of model estimation.

**Table 6:** Results of Model 1 Using Fixed Effects Method

Variables	Coefficient	t- Statistic	Significance Level
SCIN	0.001	0.60	0.54
MSS	0.004	3.55	0.000
INDEP	-0.003	-0.91	0.36
GS	0.04	7.84	0.000
FSIZE	-0.01	-3.005	0.003
DUA	0.007	0.74	0.46
DP	0.09	3.42	0.000
CS	0.03	2.56	0.01
CONT	0.001	1.13	0.25
CFO	-0.005	1.84	0.06
BFSIZE	-0.001	-1.53	0.12
AGE	0.005	0.11	0.91
CI	0.002	0.20	0.83
C	0.13	3.99	0.000

According to the Table 6, the results show that considering the significant level of variables, financial structure variables, major shareholder size, sales growth, dividend ratio, firm size have a significant effect with more than 95% confidence return on assets. Other variables do not have a significant relationship with the relationship between financing and return on assets of the banks and do not influence them. Goodness of fit test result: According to Table 7, determining coefficient of the model suggests that 87 percent of the changes in Changes in return on assets are explained by variables inserted in the model. Moreover, Durbin- Watson statistic value is between 1.5 and 2.5 and the model does not have the problem of Autocorrelation.

**Table 7:** Goodness of Model 1

21.90	F-statistic	0.87	R-squared
2.06	Durbin-Watson stat	0.83	Adjusted R-squared
		0.0000	Prob.(F-statistic)

## 5.5 The Second Assumption Test

The second hypothesis suggests that corporate governance, financial constraints, capital intensity and size significantly influence the relationship between financial structure and return on equity of banks listed on the TSE. The result of model estimation for the second hypothesis was tested using diagnostic tests. It showed that in terms of the number of significant items, coefficient of determination, normal distribution of residual components, heterogeneity of variance, correlation, Durbin - Watson and generally being significance the model is approved. Table 8 provides the results of model estimation.

**Table 8:** Results of Model 2 Using Fixed Effects Method

Variables	Coefficient	t-Statistic	Significance Level
SCIN	-0.03	-1.04	0.29
MSS	0.01	0.40	0.68
INDEP	-0.09	-2.18	0.03
GS	0.19	2.81	0.005
FSIZE	-0.17	-3.36	0.001
DUA	0.01	1.52	0.12
DP	1.16	3.03	0.003
CS	0.33	3.91	0.000
CONT	0.01	0.88	0.37
CFO	-0.05	-2.90	0.004
BSIZE	-0.009	-1.05	0.29
AGE	-0.03	0.58	0.56
CI	-0.37	-2.31	0.02
C	1.45	3.17	0.002

According to the Table 8, the results show that considering the significant level of variables, financial structure variables, board independence, dividend ratio, operating cash flow, sales growth, capital intensity and size of company have a significant effect return on equity. Other variables do not have a significant relationship with the relationship between financing and Return on equity of the banks and do not influence them. Goodness of fit test result: According to Table 9, determining coefficient of the model suggests that 73 percent of the changes in changes in return on equity are explained by variables inserted in the model. Moreover, Durbin- Watson statistic value is between 1.5 and 2.5 and the model does not have the problem of Autocorrelation.

**Table 9:** Goodness of Model 2

0.0000	Prob. (F-statistic)	0.73	R-squared
2.47	Durbin-Watson stat	0.64	Adjusted R-squared
		8.38	F-statistic

## 6 Conclusion

The present study was designed to declare the roles of corporate governance, financial constraints, size and capital intensity on the relation between financial structure and return on Asset and return on equity of banks admitted to the Tehran stock exchange. The results show that the larger the size of the banks, the higher the transparency information, the lower the financial constraints, the greater the opportunities for growth, the lower the probability of bankruptcy, and the greater the credibility of the capital market lenders and investors, as well as the sensitivity of investment to cash flows, so that larger banks face less investment attraction problems and ultimately increase their profitability and returns. Banks with dividend payments face less financial constraints, which will not reduce the value of the bank and their financial performance, but if banks cut dividends, this could negatively influence the stock market price and reduce their reputation. On the other hand, the increase in dividend yields reduced cash flow of banks and they are forced to go abroad and, as a result, reducing free cash flow will reduce the agency's problems. Accordingly, banks will divide net profit and returns in terms of

their investment opportunities, their financing and the cost of capital belonging to it in such a way as to increase the value of the bank. It is better to have large and active banks in the international arena with a risk and auditing committee to provide information and advice on the current and future status of the bank's risk-taking strategy, which can improve net profit and returns of banks. Increasing the presence of independent non-executive directors in the board of directors helps to reduce the conflict of interests between shareholders and managers of the bank in board meetings. If members are not members of the board of directors, the board may exercise more effective oversight of the banks. The use of non-executive directors with financial knowledge can lead to desirable decision makers and, consequently, improve the financial performance of banks.

Separation of the duties of the CEO and the chairman of the board of directors will further control and strengthen the bank's management system in such a way as to reduce costs, problem of representation and increase the net profit and returns of banks. It is better to use banks from the chairman of the board of directors and also to distinguish between the duties of the CEO and the chairman of the board of directors, which can improve the performance of banks in relation to banks under the influence of the CEO. By increasing the ratio of ownership of institutional investment, the quality of profit and returns of banks improves. The existence of institutional investors in the bank reduces the agent's costs by controlling the performance of the directors and also wants to provide accurate and timely information on the activities of the bank. The board of directors of banks should have financial knowledge and various skills, including banking and law, to supervise management and participate in decision making, which can lead to an increase in the value of the bank. When banks have poor financial performance, they will use financial knowledge managers to combine their board of directors. The more members of the board of directors gain financial and accounting knowledge in the banks, they can have more effective oversight of the management of the bank, which will increase the value of the bank.

## References

- [1] Abdul Rahman, R., Ali, F.H., *Board, audit committee, culture and earnings management: Malaysian evidence*. Managerial Auditing, 2006, **21(7)**, P.783-804.
- [2] Akbar, S., Poletti-Hughes, J., El-faitouri, R., Alishah, S.Z., *More on the relationship between corporate governance and firm performance in the UK: Evidence from the application of generalized method of moments estimation*. Research in International Business and Finance, 2016, **38(c)**, P.417-429.
- [3] Al-Nasser Abdullah, A., Ismail, A.K., *Corporate governance practices, ownership structure, and corporate performance in the GCC Countries*. Journal of International Financial Markets, Institutions & Money, 2017, **46**, P.98-115.
- [4] Amiri, S., Amiri, A., Sedeg, S., *Impact assessment mechanisms of corporate governance and financial restrictions on cash holdings in companies listed in Tehran Stock Exchange*. Journal of Sivilica, National Conference Accounting, Auditing and Management, 2014, **1**, P.1-11. (In Persian)
- [5] Arsalan, O., Florackis, C., Ozkan, A., *The role of cash holdings in reducing investment cash flow sensitivity: Evidence from a financial crisis period in an emerging market*. Emerging Markets Review, 2006, **7(4)**, P.320–338.

- [6] Banos-caballero, S., Garcia-Teruel, P., Martiez- Solano, P., *Working capital management, corporate performance and financial constraints*. Journal of Business Research, 2014, **67(3)**, P.332-338.
- [7] Belkoui, A.R., *Capital Structure-determination, Evaluation and Accounting*. Westport, CT United States: Quorum Books., 1999.
- [8] Brealey, R., Myers, S., Marcus, A., *Fundamentals of Corporate Finance*. Third Edition, United States of America: McGraw- Hill Companies, 2001.
- [9] Chau, G., Leung, P., *The impact of board composition and family ownership on audit committee formation: Evidence from Hong Kong*. Journal of International Accounting, Auditing and Taxation, 2006, **1(15)**, P.1-15.
- [10] Duru, A., Iyengar, Raghavan J., Zampelli, Ernest M., *The dynamic relationship between CEO duality and firm performance: The moderating role of board independence*. Journal of Business Research, 2016, **67**, P.1-9.
- [11] Fama, E.F., French, K.R., *Financing decisions: Who issues stock?* Journal of Financial Economics, 2005, **76**, P.549-582.
- [12] Forbes, D.P., Milliken, F.J., *Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups*. Academy of Management Review, **24(3)**, P.489-505.
- [13] George, R., Kabir, R., Qian, J., *Investment cash flow sensitivity and financial constraints: New evidence from Indian business group firms*, Journal of Multinational Financial Management, 2011, **21(2)**, P.69-88.
- [14] Michael, C., Jensen, W., Meckling, H., *Theory of the firm: managerial behaviour, agency costs and ownership structure*. Journal of Financial Economics, 1976 **3(4)**, P.305–360.
- [15] Modigliani, F., & Miller, M., *Corporate income taxes and the cost of capital: A correction*. The American Economic Review, 1963, **53(3)**, P.433-443.
- [16] Muchiri, M., Muturi, W., Ngumi, P., *Relationship between financial structure and financial performance of Firms Listed at East Africa Securities Exchanges*. Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB), 2016, **5(1)**, P.1734-1755.
- [17] Myers, S. C., *The capital structure puzzle*, Journal of Finance, 1984, **39(3)**, P.575-592.
- [18] Rahimian, N., & John Fada, R., *Corporate governance system and financial constraints, sensitivity of investment to cash flow*, Journal of Investment Knowledge, 2014, **3(10)**, P.25-46(In Persian).
- [19] Ramsay, I., & Blair, M., *Ownership concentration institutional investment and corporate governance*, Melbourne University Law Review, 1993, **19**, P.153-194.
- [20] Singh, D., & Delios, A., *Corporate governance, board networks and growth in domestic and international markets :Evidence from India*. Journal of World Business, 2017, **52(5)**, P.615- 627.
- [21] Sinkey, J.F., *Commercial Bank Financial Management in Financial Service Indust.*, New York: Macmillan, 1989.
- [22] Wang, Z.J., Deng, X.L., *Corporate governance and financial distress: Evidence from Chinese listed companies*. The Chinese Economy, 2006, **39(5)**, P.5-27.