



Effect of the Corporate Governance Structure on the Performance of Banks in Financial Crises

Mehdi Zolfaghari

PhD student in Accounting, Persian Gulf International Center, Islamic Azad University, Khorramshahr, Iran.
mehdi91z@chmail.ir

Seyyed Ali Waez

Associate Professor of Accounting, Faculty of Economics and Social Sciences, Shahid Chamran University, Ahvaz, Iran
(corresponding author).
sa.vaez@scu.ac.ir

Mohammad Khodamoradi

Department of Mathematics, Izeh Branch, Islamic Azad University, Izeh, Iran.
mohammad_moradi57@yahoo.com

Submit: 05/02/2023 Accept: 25/02/2023

ABSTRACT

Improvement in the performance of banks is one of the fundamental pillars of their competition. One of the factors affecting the improvement in the financial performance of banks is corporate governance. The present research aimed to provide a model for the effect of corporate governance on the performance of banks in the event of financial crises. The statistical population of this research includes the information of 10 banks listed on the Tehran Stock Exchange for 10 years during the years 2011 to 2020 (1390 to 1399 in Iranian calendar). The present research method is post-event in order to find analytical relationships between the studied variables based on statistical methods. In this research, the financial statements of the banks listed on the Tehran Stock Exchange are made based on the screening sampling method and receiving the required information from them, the relevant calculations and the testing of the hypothesis variables. A multivariate regression model was to test the hypotheses. The results suggest that corporate governance has a significant effect on the rate of return on assets in financial crises, while corporate governance does not have a significant effect on Tobin's q ratio in financial crises.

Keywords: Corporate governance, Financial performance, Bank

1. Introduction

The world of banking is growing and developing unpredictably. Improving the performance of banks, whether in the period of financial crises or in the absence of crises, is one of the fundamental pillars of their competition. Obviously, the more banks can improve their performance, the better the foundation for their existence in competitive markets (Latan et al., 2018).

The 2007-2008 financial crisis, or Global Financial Crisis (GFC), is considered the most serious and destructive economic recession since 1929. Banks played an important role in maintaining the stability of financial markets during the GFC. The recent widespread financial scandals in companies and the increase in crisis and financial crimes in similar cases worldwide are related to the issue of agency. Accordingly, in order to reduce financial crimes and improve the performance of companies, regulatory mechanisms should be created to reduce the gap between ownership and control. One of such regulatory mechanisms is the design and implementation of the corporate governance system. Several studies have shown that the existence of institutional ownership can decrease agency problems by providing efficient regulation of managers and by reducing information asymmetry between the firm and lenders (Chaney, Faccio, & Parsley, 2011).

Given the effects of corporate governance on financial activities, the necessity to pay attention to the corporate governance factors in order to improve performance in banking industries is felt more. Because banks are one of the most important financial institutions that consider attracting customer deposits as their main task, which makes banks the focus of most stakeholders' attention due to their position (Gao et al., 2019). Iranian banks have always been determined to improve their performance in order to fulfill their main mission, which is increasing wealth and creating added value. Because it is financial institutions and banks that play the main economic role in improving the country's situation. It is obvious that while performing these tasks, along with the need to protect the interests of investors and creating trust of banks for customers, as well as predicting financial crises, they can be the basis for their better performance (Saadi, 2016). One of the factors that can be the basis for a proper interaction between banks and customers is the necessity to observe the principles of

corporate governance by banks and its increasing development.

In recent years, we have seen significant changes in the field of establishing corporate governance systems in the financial structure of banks, which has received the attention of banks in developed countries in the past. On the contrary, stakeholders and depositors have shown their interest in establishing the corporate governance system in banks. Because corporate governance and the absence of harmful political connections can play a positive role in the optimal allocation of banking resources and provide the means for economic prosperity. From this perspective, legislators in different countries have strived to implement some principles of corporate governance regarding the working environment of banks, such as the implementation of internal controls, description of duties of the board of directors and the CEO, the need to separate the role of the CEO from the policy of the board of directors, creating an audit committee, and establishing an internal audit department in order to reduce the destructive effects of political connections and reduce the possibility of encountering financial crises (Kraing, 2013). According to what was said, this question arises that what is the effect of political connections and corporate governance on the performance of banks in the event of financial crises?

Theoretical foundations

Banking crisis

Banking crisis refers to a situation where a large number of banks in a country are unable to repay their debts. The nature of the banking profession, due to its special characteristics, is always prone to receiving instability and risks and, in higher degrees, crises. Generally, the high degree of leverage and low capital of banks in proportion to the size of their balance sheets in comparison with other commercial companies, the maturity mismatch between assets and liabilities, the need to maintain the permanent trust of depositors, suffering from various risks including exchange rate risk, and the lack of absolute transparency in published financial statements due to the high speed of change in balance sheet items in comparison with commercial and manufacturing companies are among the factors that have identified banks as one of the sources of crises in the economy. It

has been observed in most of the major banking crises that two important components of banking (financial) crises, which are the loss of trust in financial institutions and the bankruptcy of creditors, take place. Due to the crisis and inability of bank debtors, which is caused by their unemployment and low income, banks are faced with not receiving their claims, and as a result, their reserves decrease, and consequently, they are not responsible for their obligations to depositors. The result is that the creation of a crisis causes the loss of public trust in banks and the rush of depositors to the banks to withdraw their deposits. In this situation, due to the existence of systemic risk in the banking industry, the acute problems and bankruptcy of small banks spread to other banks and involve the entire banking system of the country and then the banking system and the macroeconomic space of other countries as well. In this situation, the banking crisis destroys the country's economic situation. For example, in the Indonesian financial crisis in 1997, which probably left the heaviest effects in the Asian economy, the GDP rate decreased by 15.3%, and in 1998, the GDP and unemployment increased to 22%, and almost half of the population lived in poverty. In such a situation, a very large capital cost from public funds was needed (Ali Beigloo, 2014).

Corporate governance

The term "corporate governance" was briefly defined as "the system by which companies are directed and controlled". The term "corporate governance" refers to all entities, processes, and mechanisms designed and used to guide and control companies. Although the term has been used around the world since the early 1980s, there is still no general consensus on its importance and what it effectively entails. International literature as well as several domestic and transnational authorities provide different definitions mainly based on the scope and diversity of stakeholders and the scope and diversity of bodies and mechanisms governing the company (Kumar and Zatoni, 2015). Despite the existence of multiple definitions, the common point of the analysis is to recognize the role of corporate governance in reducing the conflict of interests between shareholders in a firm. By exerting influence on this need, a turning point in the conceptualization of corporate governance was provided by Cadbury's (1992) report entitled "Financial Aspects of Corporate Governance", which

describes corporate governance as "the system by which companies are directed and controlled." The report was published by "The Committee on the Financial Aspects of Corporate Governance", chaired by the aforementioned Adrian Cadbury, to make recommendations on corporate board arrangements and accounting systems to mitigate risks and failures of corporate governance. Specifically, the Cadbury's report states that "corporate governance is concerned with holding the balance between economic and social goals and between individual and communal goals. The governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. The aim is to align as nearly as possible the interests of individuals, corporations, and society". Over the following years, several other definitions were proposed, some based more on the idea that the firm produces value specifically for shareholders, and others focused more on the broader idea of creating value for a larger number of shareholders. According Denis and McConnell (2003), corporate governance is "the set of mechanisms — both institutional and market-based — that induce stakeholders interested in a company to make decisions that maximize the value of the company for its shareholders". In general, corporate governance is a set of relationships among shareholders, managers, and auditors of a company, which guarantees the establishment of a control system in order to respect the rights of the constituent shareholders and the correct implementation of the approvals of the assembly and to prevent possible abuses (Gao et al., 2019).

Several studies have investigated the role of corporate governance on improving financial performance, for example:

Cardiallo (2017) investigated the relationship between corporate governance, ownership concentration, and the growth and financial performance of banks. He found that the main reason for using corporate governance is to regulate the part of the company that controls the assets of shareholders and investors. This ensures that the balance of power is appropriately distributed among board members, that executives are fairly rewarded, that the board accepts responsibility for overseeing executives and managing risks, that external observers are independent, and that the company is not influenced by their performance. Salim et al. (2016) investigated the effect of internal

mechanisms of corporate governance on the performance of banks. They found that banks, as mediators of funds, have always played an irreplaceable role in the economy of every country, however, playing this role, along with "protecting the interests of depositors", "maintaining trust and confidence in banks" on the one hand, and on the other hand, the increasing complexity of banks' operations, and their sensitivity to the liquidity crisis, has created complicated conditions in establishing a balance of interests between all the stakeholders of a bank, and in this regard, one of the appropriate solutions to establish this balance is to promote corporate governance in banks. Deniz et al. (2018) investigated the role of corporate governance on the financial stability of banks. They found that given the necessity of using effective methods of corporate governance in order to gain and maintain public trust in the banking system and considering that in recent years, on the one hand, significant progress has been made towards the establishment of the corporate governance system, through legislation, regulatory measures, and also the voluntary actions of banks, and on the other hand, depositors and other stakeholders of banks have become more aware of the necessity and importance of the corporate governance system and have become interested in the establishment of this system, it is natural that the establishment of a comprehensive and effective corporate governance system can affect the development and efficient performance of financial markets, the optimal allocation of resources, prevention of banks from facing liquidity crisis and even their bankruptcy.

Methodology

The present research is of descriptive-causal type using the post-event approach. The statistical population of the research includes the banks listed on the Tehran Stock Exchange. The present study was conducted during a period of 10 years from 2011 to 2020 (the beginning of 1390 to the end of 1399 in Iranian calendar). The sampling method is based on the screening method; thus, the selected sample includes companies that are full members of the Tehran Stock Exchange during the years under review, their financial year ends on Esfand 29 (March 20) of each year, and have not changed their financial year during the research period. Based on the required information, the financial statements and their

accompanying notes need to be available to extract data in the research scope. Considering the above conditions, a total of 10 companies were selected as a sample during 2009-2018 (1388-1397 in Iranian calendar).

The hypotheses of this study include the following:

- 1) Corporate governance has a significant effect on the rate of return on bank assets in financial crises.
- 2) Corporate governance has a significant effect on bank's Tobin's q ratio in financial crises.

In this research, a multivariate linear regression model is used to investigate the effect of corporate governance on the rate of return on assets and Tobin's q ratio of bank while controlling the effect of other factors affecting this relationship:

$$FP_{i,t} = \alpha_0 + \alpha_1 CG_{i,t} + \alpha_2 Control_{i,t} + \epsilon_{i,t}$$

where FP is financial performance, CG is corporate governance, and Control is the control variables. The research variables include dependent variables such as rate of return on assets (obtained by dividing net profit by total assets) and Tobin's q ratio (from dividing the market value of assets) and control variables such as company size (it shows the natural logarithm of the company's total assets), financial leverage (the ratio of total liabilities to the company's assets), and liquidity ratio (the ratio of current assets to current liabilities of the company). Corporate governance as an independent variable includes four variables: independent members of the board of directors, percentage of dormant members, board of directors, government ownership, and institutional ownership of the company.

Data analysis was carried out in two ways of descriptive and inferential. In the first stage, descriptive statistics of the variables are described, based on which the status of the variables was discussed and investigated in general terms and based on dispersion indices. In the second stage, statistical tests were described. In this way, first, the normality of disturbance terms of the hypothesis test model was checked by using Jarque-Bera test. In the next step, the reliability of the variables was challenged through the Levin, Lin, and Chu test. In the next step, the collinearity between variables is tested through tolerance indices and variance inflation factor. In the following, the variance of heterogeneity of the variables was checked using White's test and the selection of the panel data

method against pooled data was done using F-Limer test. Then, using the Hausman test, the selection of the fixed effects method against the random effects was discussed, and eventually, the hypotheses were tested using multivariate multilinear regression. Finally, based on the findings of neural networks and nonlinear regression, the model was presented.

Results

Descriptive Statistics

Based on the collected data, the spatial and temporal domain and the evaluation of descriptive statistics, the mean return on assets is equal to 0.108, which shows that most of the data related to this variable are concentrated around this point. In general, dispersion criteria are criteria to determine the degree of dispersion of data from each other with their degree of dispersion relative to the mean. One of the most important criteria of dispersion is standard deviation. Among the variables, liquidity has the highest and financial leverage has the lowest dispersion (Table 1).

Based on Table 1, the results of the descriptive statistics of the research data show that, for example, the mean value of return on assets is 0.108564, in other words, most of the data related to this variable are concentrated around this point. The median of this variable is 0.090782, which shows that half of the data is lower than this value and the other half is greater. The value of the standard deviation for this variable is 0.131258, which shows the dispersion of the said

variable around the average. Considering that the number of samples in the current research includes 153 companies for 10 years, the research variables will have a normal distribution.

Before proving the hypotheses, it is necessary to ensure the normal statistical distribution of the disturbance terms in the research hypotheses model. The results obtained from Jarque-Bera test indicate the normality of the data because the probability value of the Jarque-Bera statistic was more than the 5% error level. Then, ARCH (White) method was used to check the heterogeneity of variance. The obtained results show that the probability value of the mentioned test is higher than the error level of 5%, therefore, there is no heterogeneity of variance (Table 2).

After proving the homogeneity of variances, first, by using the F-Limer test, the panel data model was selected against the pooled data. The results obtained from F-Limer test confirm the use of panel data because the probability of F-Limer test statistic was less than the 5% error level. Then, the Hausman test was used to select the fixed effects model against the random effects model, due to the selection of the panel data model against the pooled data, to perform the regression. The results of Hausman test are presented in Table (3), considering that the significance level of the test in the models is less than 0.05, therefore, the use of the fixed effects model in the mentioned hypotheses was confirmed.

Table 1. Descriptive statistics of the research data

Variable	Return on assets	Tobin's q	Corporate governance	Company size	Fianncial leverage	Liquidity
Mean	0.108564	2.026698	0.530556	14.02145	0.586174	1.627431
Median	0.090782	1.587596	0.5	13.85119	0.601016	1.292029
Maximum	0.631343	18.24292	1	19.77391	0.777506	43.81158
Minimum	0.404462	0.378889	0	10.03122	0.012733	0.209373
Std. deviation	0.131258	1.436129	0.278402	1.519956	0.218575	1.986941
Observations	153	153	153	153	153	153

Table 2. Variance heterogeneity test - ARCH method

Test	Hypothesis	Test statistic	Probability of test statistic
ARCH	1	1.56	0.184
	2	0.021	0.883

Table 3. Selecting the fixed effects model against random effects based on Hausman method in the research hypotheses

Test	Hypothesis	Test statistic	Probability of test statistic
Hausman	1	71.770	0.00
	2	142.830	0.00

One way to avoid spurious regression is to ensure data stationarity. Therefore, before estimating the statistical properties of the panel data model, the normality or the presence of the unit root is investigated.

According to the Table 4, the significance level is less than 0.05, as a result, the null hypothesis is rejected and the opposite hypothesis is confirmed, in other words, the variables of the research are stationary with the Levene's method. According to the obtained results, the null hypothesis that the variables have a single root is not accepted.

Fixed effects regression model was used to confirm the research hypotheses. The results obtained from the first hypothesis of the research (corporate governance has a significant effect on the rate of return on assets in financial crises) are shown in Table 5.

The results from the above table show that corporate governance has a significant effect on return on assets in financial crises. Because the probability value of its t-statistic (0.0000) is less than the 5% error level. Therefore, the first research hypothesis was confirmed at the 95% confidence level. Based on the adjusted coefficient of determination of the model (0.689), approximately 68.9% of the changes in return on assets can be explained by the corporate governance and control variable. On the other hand, the estimated probability value for the F-statistic (0.000) is less than 0.05. Therefore, the significance of the whole regression can be confirmed and the variables of corporate governance and control are able to show return on assets. Finally, the Durbin-Watson

test was used to check the autocorrelation between the research variables, and its value is 1.65 and because it is in the range of 1.5 to 2.5, and the assumption of no correlation between the errors is not rejected, it is possible to use simple and multiple regression (Table 5).

The regression fixed effects model of the second hypothesis (corporate governance has a significant effect on the Tobin's q ratio in financial crises) is shown in Table 6.

The numerical value of the adjusted coefficient of determination states that how many percent of changes in the dependent variable can be explained by the independent variable. Based on the adjusted coefficient of determination of the model (0.212), approximately 21.2% of the changes in Tobin's q can be explained by the corporate governance and control variable. The value of the Durbin-Watson statistic is 1.79 between 1.5 and 2.5, and the assumption of no correlation between errors is not rejected, and simple and multiple regression can be used. On the other hand, the estimated probability value for the F-statistic (0.000) is less than 0.05. Therefore, the significance of the whole regression can be confirmed and the corporate governance and control variables are able to show Tobin's q. According to Table 5, it shows that because the significance level of corporate governance (0.336) is more than 5%, the second research hypothesis was not confirmed. Therefore, it can be said that corporate governance has no significant effect on Tobin's q in financial crisis (Table 6).

Table 5. Unit root test results

Variable	Levene	
	Statistics	Probability
Return on assets	-17.57	0.000
Tobin's Q	-8.66	0.000
Political Connections	-8.88	0.000
Corporate governance	-28.48	0.000
Company size	-6.13	0.000
Financial leverage	-12.65	0.000
Liquidity	-17.94	0.000

Table 5. Fixed effects regression model of the first research hypothesis

Dependent variable: Return on assets				
Variable	Coefficient	Std. error	t-statistic	Sig. level of t-statistic
Constant	0.458065	0.052669	8.697009	0.0000
Corporate governance	-0.075140	0.007754	-9.690806	0.0000
Company size	-0.010757	0.003630	-2.963637	0.0031
Financial leverage	-0.295019	0.015765	-18.71367	0.0000
Liquidity	0.008681	0.001588	5.467842	0.0000

Dependent variable: Return on assets				
Variable	Coefficient	Std. error	t-statistic	Sig. level of t-statistic
Coefficient of determination	0.721	Durbin-Watson		1.659
Adjusted coefficient of determination	0.689	F-statistic (sig. level)		(0.000)22.758

Table 6. Regression Fixed effects model of the second research hypothesis

Dependent variable: Tobin's q				
Variable	Coefficient	Std. error	t-statistic	Sig. level of t-statistic
Constant	-6.840808	0.917780	-7.453646	0.0000
Corporate governance	0.129944	0.135111	0.961756	0.3363
Company size	0.624585	0.063249	9.875064	0.0000
Financial leverage	-0.038656	0.274709	-0.140716	0.8881
Liquidity	0.039098	0.027664	1.413332	0.1578
Coefficient of determination	0.292	Durbin-Watson		1.792
Adjusted coefficient of determination	0.212	F-statistic (sig. level)		(0.000)3.641

Discussion

Open conversation among managers and board members and communication with various stakeholders can help managers implement sustainability strategies not only within the company but also with suppliers, customers, and employees. The issue of corporate governance in banks depends on the characteristics of managers, the composition of board members, and financial and other incentives to align the activities of people with key roles with the interests of shareholders. Senior managers may be chosen from the main shareholders or may be someone employed other than the shareholders. Most of the bank managers are initially selected from the main shareholders, if the shareholders do not have enough experience in directing the daily operations of the bank or do not have enough time for this work, it will be necessary to employ professional managers. Professional managers are experts needed to properly guide the bank's activities. However, employed managers may not necessarily have a motivation to maximize shareholders' wealth due to various reasons, including the way they are selected and appointed, and the employed manager's behavior may not necessarily be in line with realizing shareholders' interests. Weak corporate governance may lead to a loss of market confidence in a bank's ability to manage its assets and liabilities, including its deposits. This can cause people to rush to withdraw deposits and face the bank with a financial crisis. In fact, in addition to the duties they have towards their shareholders, banks also have a serious responsibility towards depositors and other

stakeholders. The legal system of a country determines the official duties of a bank towards shareholders, depositors, and other stakeholders. Accordingly, the effect of corporate governance on performance in financial crises is clarified.

The results of testing the first hypothesis show that corporate governance has a significant effect on the rate of return on assets in financial crises. Numerous studies have shown that the presence of institutional ownership can reduce agency problems by providing efficient regulation of managers and by reducing information asymmetry between the firm and lenders. Firms with higher levels of institutional ownership are more likely to end up with weak executive managers and are associated with better valuations. Some studies also show that the ratio of institutional ownership increases with the quality of the corporate governance structure. Therefore, if the existence of institutional ownership has an established governance mechanism to discipline managers, it should also reduce the negative effect of political connections (Agarwal et al., 2011; Chung and Zhang, 2011).

The results of testing the sub-hypothesis show that corporate governance has a significant effect on the rate of return on assets in financial crises. Numerous studies have shown that the presence of institutional ownership can reduce agency problems by providing efficient regulation of managers and by reducing information asymmetry between the firm and lenders. Firms with higher levels of institutional ownership are more likely to end up with weak executive managers and are associated with better valuations. Some studies

also show that the ratio of institutional ownership increases with the quality of the corporate governance structure. Therefore, if the existence of institutional ownership has an established governance mechanism to discipline managers, it should also reduce the negative effect of political connections (Agarwal et al., 2011; Chung and Zhang, 2011).

According to the findings, it is suggested, 1) to use more dormant members in the composition of the board of directors 2) to separate the role of the CEO from the role of the chairman of the board of directors 3) to not use a CEO for a long period of time 4) to give shares to institutional shareholders and shareholders above five percent 5) to establish an internal audit department 6) to rank sample banks based on disclosure of corporate governance information. Also, it is suggested to the standardization authorities to formulate the necessary standards for proper measurement of corporate governance.

References

- * Aggarwal, R., Erel, I., Stulz, R.M. Williamson, R. (2007). Do U.S. Firms Have the Best Corporate Governance? A Cross-Country Examination of the Relation between Corporate Governance and Shareholder Wealth. National Bureau of Economic Research. DOI: 10.3386/w12819. Available at <https://www.nber.org/papers/w12819>
- * Ali Beigloo, M. (2013). Financial crisis and profit sensitivity difference as a measure of conservatism. Master's thesis. Raja Non-Profit Non-Governmental Higher Education Institute, Qazvin.
- * Anginer, D., Demircuc-Kunt, A., Huizinga, H., Ma, K. (2018). Corporate governance of banks and financial stability. *Journal of Financial Economics*. 130(2), 327-346.
- * Chung, K., & Zhang, H. (2011). Corporate Governance and Institutional Ownership. *Journal of Financial and Quantitative Analysis*, 46(1), 247-273. DOI:10.1017/S0022109010000682
- * Deegan, CM. (2013). *Financial accounting theory*. Sydney: McGraw Hill Book Co.
- * Latan, H., Jabbour, J.C.J., de Sousa Jabbour, ABL., Wamba, S.F., Shahbaz, M. (2018). Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. *Journal of Cleaner Production*, 297-306.
- * Saadi, Y. (2016). The effect of corporate governance on the performance of banks listed on the Tehran Stock Exchange. Master's thesis in accounting, Rozbahan Institute of Higher Education.
- * Salim, R., Arjomandi, A., Heinz Seufert, J. (2016). Does corporate governance affect Australian banks' performance? *Journal of International Financial Markets, Institutions and Money*, 43, 113-125.
<https://doi.org/10.1016/j.intfin.2016.04.006>.