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Assay the Effect of Ownership Structure on Risk-Taking Behavior in Accepted Banks in Tehran Stock Exchange

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Abstract: In competitive and uncertain world, companies including banks behavior towards risk greatly affect their performance. This study assays the effect of ownership structure on bank risk-taking behavior from 1388 until the end of 1392. The population of the study is the accepted banks in Tehran Stock Exchange. Variables needed to use the Software Excel calculated and then through multiple regressions, using Eviews Software and Fisher F test research hypotheses were tested. With this study it was foundthat managerial ownership is positive and significant effect on the degree of risk-taking by banks. Moreover, it was found that Franchise value (the bank) and the ratio of fixed assets to total assets have a negative impact on bank risk-taking. The results show that equity and bank size have no effect on the bank's risk taking.

Key words: Bank ownership structure, risk taking behavior, managerial ownership, Fisher, exchange

INTRODUCTION

Banking system along with stock market and insurance are considered as key elements of financial markets and they play an important role to attract and guide deposit makers' funds. In Iran economy, banking is more important due to under development of capital markets since practically it is the bank where is responsible for long-term financing (Ordbacheh and Pordel, 2012). In the past banking crises repeatedly happened for three decades including 2008 financial crisis, Mexico 1994-1995 crisis, Asia 1997 financial crisis and Russia 1998 crisis. Such events show inherent unstable nature of the banks and the tendency of banks to excessive risk-taking (Barry *et al*., 2011).

Banking institutions have special major features which justify special benefits in the analysis of their risk-taking incentives (Garcia-Marco and Robles-Fernandez, 2008). Various factors affect the risk-taking of the banks. The capital adequacy is one of the factors affecting the risk-taking and it reduces the risk-taking as well. The ownership of fixed shareholders also negatively affects risk-taking of the banks. However, if the priorities of bank managers get consistent with the priorities of bank shareholders, ownership of fixed shareholders should have a positive correlation with risk-taking of the bank (Konishi and Asuda, 2004). Value of company (bank) (present value of the future economic benefit of the bank which will be earned) also reduces the incentive for risk-taking of the banks. This is why that if the risk of business strategy in the banks that have high value leads to bankruptcy, they harm more (Sun and Liu, 2014). The bank size is another factor affects the bank risk-taking (Saunders *et al*., 1990).

In addition to the above-mentioned, regarding representation theory; risk-taking behavior is based on conflict between the shareholders and managers. Different objectives of investors and board members create issues as representation problems (Abbasi and Rastegarnia, 2012). This theory predicts that managers in support of their position and their personal interests don't take the risk while a stakeholders with various portfolio have incentives to increase risk (Asrairy, 2013; Mohammadi *et al*., 2010). However, if managers' objectives are consistent with shareholders' objectives, the conflict between managers and shareholders can be reduced (Chan *et al*., 1998; Garcia-Marco and Robles-Fernandez, 2008; Konishi and Asuda, 2004). One way in which the consistency of the benefits happens is through the management ownership of shares in the company. Based on the benefits consistency hypothesis; as management ownership percentage increases, mangers' benefits get consistent with shareholders' (Setayesh and Ebrahimi, 2012). Due to the potential impact of management ownership on reducing representation issues, the present study aimed at investigating the effect of bank ownership structure regarding the management ownership on risk taking behavior.

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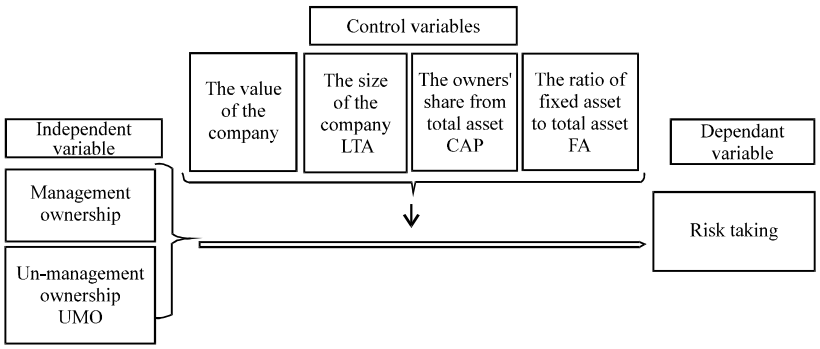

Fig. 1: Conceptual model of the study

Literature review: Jensen and Meckling (1976) expressed the role and importance of management ownership and they stated that holding the shares by the institution management helps to the consistency of the benefits between shareholders and managers. Saunders *et al.* (1990) examined the relationship between ownership structure and the bank risk-taking and they found a positive relationship between the stock management ownership and risk-taking. Results by Gorton and Rosen (1995) showed an inverse and u-shaped relationship between management ownership and risk-taking and they found a negative relationship between the value of company (bank) and risk-taking as well. Demsetz *et al.* (1996) found a negative correlation of value of the company (the bank), systematic risk, unsystematic and total risk in the bank holding company. Results by Demsetz *et al.* (1996) showed a positive correlation between management shareholder and risk and negative correlation between value of the company (bank) and risk. Chen *et al.* (1998) studied the relationship between risk and ownership structure among depository institutions and the results showed a negative and nonlinear relationship between management ownership and risk-taking. Anderson and Fraser (2000) presented evidences which showed that the management shareholders are important determinants of risk-taking. Konishi and Asuda (2004) examined the factors affecting risk-taking behavior in the Japanese commercial banks and their results showed a decrease in value of the company (bank) will increase the bank risk. Gonzalez (2005) analyzed the impact of bank rules on the value of the bank and the risk-taking and the results showed that regulatory constraints increase risk-taking motivation of the bank. Chun *et al.* (2011) examined the effect of managerial ownership on bank risk-taking behavior in Korea and Japan and they found that that managerial ownership alone does not affect the risk or the interest level of Korean banks regarding the previous studies the conceptual model of this study is as follows show in Fig. 1.

MATERIALS AND METHODS

The statistical population of this study consisted of all banks listed in Tehran Stock Exchange while their needed financial information from 2009-2013 were completely available. Due to limited population, sampling was avoided and the whole population with seven banks for 6 months periods was investigated. The data contained information related to the bank financial statements and market data which were gathered through the official website of the Stock Exchange and also by going to the bank personally. In order to summarize the data, first the variables were calculated by using collected data for each bank and each of the studied years for 6 months. All summery operation was done by using Excel then through multivariate regression analysis and Eviews-7 and finally F-Fisher test was used to test the research hypothesis.

Research model and its variable: This study aimed to examine the effects of ownership structure in banks on their risk-taking behavior Eq. 1 is based on Sun and Liu (2014) Model. The model variables have been considered logarithmically:

$$\log(\text{Risk}_{it}) = \beta_0 + \sum \beta_1 \log(\text{MO}_{it}) + \sum \beta_2 \log(\text{UMO}_{it}) + \sum \beta_3 \log(Q_{it-1}) + \sum \beta_4 \log \text{TA}_{it}) + \sum \beta_5 \log(\text{CAP}_{it}) + \sum \beta_6 \log(\text{FA}_{it}) e_{it} \quad (1)$$

The results of correlation coefficient between independent variables showed that correlation coefficient between MO variable and UMO variable = -1. The correlation between these two variables is linear as well.

Regarding the problems that linearity create in measuring parameters of the population in order to remove linear correlation, the un-management ownership variable was deleted from Eq. 1 and to do the desired tests, Eq. 2 was used:

$$\log(\text{Risk}_{it}) = \beta_0 + \sum\beta_1 \log(\text{MO}_{it}) + \sum\beta_2 \log(\text{Q}_{it-1}) + \sum\beta_3 \log(\text{TA}_{it}) + \sum\beta_4 \log(\text{CAP}_{it}) + \sum\beta_5 \log(\text{FA}_{it}) + e_{it} \quad (2)$$

Where:

Risk_{it} = 15 days standard deviation of stock returns of each bank

Mo_{it} = Percentage of shares held by the board of directors at the time of t

UMO_{it} = Percentage of shares owned by shareholders outside of the board of directors at the time of t

Q_{it-1} = Value of the company (bank) i at time of t-1

Research variables include the type of ownership (management and un-management) as independent variables, risk-taking as the dependent variable and the value of the company (bank), the size of the bank (bank asset), the owners' share of total asset and the ratio of fixed asset to total asset are the control variables. The following explains how to calculate each variable:

$$Q = \frac{M_{va} + B_{vd}}{B_{va}} \quad (3)$$

Where:

M_{va} = Stock market value (market value is the product of share price at the end of period by number of shares)

B_{vd} = Book value of debt

B_{va} = Book value of assets

LTA_{it} = size of the bank logarithm of the total assets of ith bank at time t

CAP_{it} = Owners' share of total assets: ratio of equity to total assets of ith bank at time t

Fait = The ratio of fixed assets to total assets of ith bank at time t

Research hypothesis: Ownership structure significantly affects the risk-taking behavior of the banks. This hypothesis is statistically stated as follow:

- H_0: ownership structure has no significant effect on risk-taking of the banks
- H_1: ownership structure has a significant effect on risk-taking of the banks

RESULTS AND DISCUSSION

In order to analyze the data, descriptive statistics were first presented in Table 1.

The correlation between the independent variables: The correlation coefficient is a measure used in determining the correlation between the two variables Table 2.

The high correlation coefficient (higher than 0.8) between two descriptive variables shows linear regression model and correlation coefficient between the variables of the above table shows that there is an alignment between UMO and MO variables.

Pre-tests to determine the type of data and model: To choose between the methods of integrated data and panel data, F Limer test statistic was used. The test output has been presented in Table 3.

In this test, if the significance level is <0.05, the chosen method would be based on integrated data and otherwise panel data methods would be appropriate. Accordingly and based on the test outputs, the significance level for the F-statistic was 0.01. Thus, the used technique in this model was integrated data. Afterwards, Hausman test was used to determine the model and in order to find if the model is a fixed-effects model or a random-effects model.

The output of this test of χ^2 statistic is Hausman test that if the significance level of this test is <0.1, the fixed-effects model at the level of 90% and higher would be accepted. As the research data and output of Hausman

Table 1: The results of descriptive statistics of variables

Variables	N	Mean	SE	Max.	Min.
MO	70	0.48	0.24	0.84	0.14
UMO	70	0.52	0.24	0.86	0.16
Q	70	102424	69327	323379	28981
LTA	70	8.36	0.46	9.14	7.36
CAP	70	0.08	0.03	0.16	0.03
FA	70	0.04	0.03	0.18	0.01
RISK	70	0.06	0.02	0.12	0.02

Research calculations; SE = Standard Error

Table 2: Results of correlation between independent variables

Variabless	MO	UMO	Q	LTA	CAP	FA
MO	1.000					
UMO	1.000	1.000				
Q	-0.310	0.310	1.00			
LTA	0.050	-0.050	-0.72	1.00		
CAP	-0.270	0.270	0.72	-0.61	1.00	
FA	-0.009	0.009	0.06	-0.12	0.42	1

Research calculations

Table 3: Results of F Limer test

Effects test	Statistic	df.	Prob.
Cross-section F	2.93	658	0.01

Research calculations

Table 4: Hausman test results

Test summary	χ^2-statistic	χ^2 df.	Prob.
Cross-section random	13.84	5	0.01

Research calculations

Table 5: The results of the regression model

Dependent variable:Risk taking

Variables	Coefficients	SE	t-statistic	Prob.
Coefficient	-278.560	126.56	-2.20	0.030
MO	0.450	0.22	2.03	0.040
Q	-0.310	0.14	-2.19	0.030
LTA	-0.760	0.86	-0.88	0.380
CAP	-0.350	0.28	-1.26	0.210
FA	-0.360	0.11	-3.23	0.002

R^2 = 0.390; Mean dependent var. = -3.11; Adjusted R^2 = 0.270; SD dependent var. = 0.71; SE of regression = 0.370; Sum squared resid. = 7.59; F-statistic = 3.040; Durbin-Watson stat. = 2.14; Prob. (F-statistic) = 0.002

test show the significance level is 0.01 which is <0.1 which indicats that the model is a fixed-effects model Table 4.

The results of test hypothesis: In this study regarding Eq. 2 the research hypothesis has been examined. Results of research hypothesis have been presented in Table 5.

According to F-statistic and significance level which are 3.04 and 0.002, respectively the hypothesis is confirmed at 95%. Durbin-Watson statistic was 2.14 which indicates that the residual are uncorrelated. R^2-value was 0.39 which means that variables explained 39% of variance in the dependent variable and the rest are not influenced by other factors. According to the value of management ownership coefficients which is 0.45, a positive impact can be seen on risk-taking of the bank which is statistically significant. These findings confirmed the hypothesis and the results are in line with the results by Sanderz, Demstez, 1987-1989 period by Anderson and Fraser, Chan. According to these theories it seems that if the objectives of managers are aligned with shareholders' objectives, the conflict between managers and shareholders can be reduced and it is a way to align the interests through management ownership of shares in the company. Thus, it is expected that managers with high ownership stay in the company during a long-term and incentives and benefits of managers get more consistent with other stakeholders and the severity of representation problems is reduced. In this study Tobin's Q ratio which indicates the value of the company (bank) is 0.31 which is statistically significant and it has a negative relationship with the bank's risk-taking and 1% t increased in the value of the company (bank) and risk-taking of the bank decreased to 31%. In fact, because the company value is the present value of the future economic benefits, it reduced the risk-taking of the bank. Since, the company risk strategy leads to bankruptcy, banks with more high-value loss more. Besides, it can be noted that the company value enables it to continue to do business in the future and this value is only that bank can survive. Hence, it is less likely that a bank with high value, takes risk more than what endangers its survival. These results are consistent with theoretical basis and the results of research conducted by Gorton and Rosen (1995), Demsetz *et al.* (1996), Anderson and Fraser (2000), Konishi and Asuda (2004), Gonzalez (2005) and Chun *et al.* (2011). The ratio of fixed asset to the total assets which was expected to have a positive effect with risk-taking due to less liquidity of fixed assets, showed a significant negative effect on risk-taking while it was measured 0.36.

The research conducted by Chun *et al.* (2011) in Korean banks showed a significant impact of these variables on risk-taking. However, unlike the present study, a positive relationship was found between risk and the ratio of fixed assets to total assets. The most important reason of the negative relationship between this variable in this study with risk taking is that in Iran the investors buy shares without examining the financial statements of companies (banks). Besides, regarding the significance level of the owners' share from the total assets which is higher than 0.05, this variable is not significant and it has no effect on risk-taking of the bank. These results are in line with the results by Saunders *et al.* (1990), Demsetz *et al.* (1996), Chun *et al.* (2011) in Korean banks.

The significance level of bank size variable was measured higher than 5% which shows no effect on risk-taking of the bank. These results are also in line with the results by Saunders *et al.* (1990), Demsetz *et al.* (1996), Chun *et al.* (2011) in Korean banks.

Different and sometimes conflicting incentives between shareholders and management lead to a series of specific issues such as the differences in risk-taking, cash dividends and time horizon issues. However, the management ownership is a way to reduce conflict between shareholders and management. The present study examined the effect of ownership structure of the banks on risk-taking behavior. This study is significant since in Iran a few studies have been done on the influence of management ownership and the value of company (banks) on risk-taking. In general, according to the results of this study, the management ownership has a positive effect on risk-taking of the banks and any increase in managers' ownership aligns the goals of shareholders and managers. This finding is consistent with alignment of interests. The results showed that the value of the company (bank) and the ratio of fixed assets to total assets decrease risk-taking.

To make the results of research practical; two kinds of suggestions can be made including: practical suggestions and executive suggestions.

CONCLUSION

Regarding the results of this study and the positive effect of management ownership on risk-taking, it is suggested to the investors that in the shareholders' combination regard the amount of ownership by the director board members and to buy the bank shares in which board of directors have more shares. Also, due to the positive impact of the alignment of managers' goals and other stakeholders' in reducing representation problems, it is suggested to the officials and legislators to increase the duration of the tenure of directors to align the interests of managers and shareholders. Finally, with regard to the negative correlation between the ratio of fixed assets to total assets and risk-taking, it is recommended to the investors that when they are to buy shares of banks try to focus on the financial statements and then buy the bank shares in which the ratio of fixed assets to total assets is less.

SUGGESTIONS

The following suggestions are made in executive area:

- To examine the effect of ownership structure (management ownership) on risk-taking behavior of other industries in the Tehran Stock Exchange and to compare the effects of different industries
- To examine the effect of ownership structure (management ownership) on risk-taking behavior of banks with regard to other control variables such as market volatility, etc.
- To use other mechanisms of ownership structure such as internal ownership, private ownership, family ownership, block shareholder, etc. in examining the effects of ownership structure on risk-taking behavior of the banks

REFERENCES

Abbasi, E. and F. Rastegarnia, 2012. The effect of ownership structure on firms value in Tehran Stock Exchange. J. Empirical Res. Acc., 2: 33-50.

Anderson, R.C. and D.R. Fraser, 2000. Corporate control, bank risk taking, and the health of the banking industry. J. Banking Finance, 24: 1383-1398.

Barry, T.A., L. Lepetit and A. Tarazi, 2011. Ownership structure and risk in publicly held and privately owned banks. J. Banking Finance, 35: 1327-1340.

Chen, C.R., T.L. Steiner, A.M. Whyte, 1998. Risk taking behavior and management ownership in depository institutions. J. Financial Res., 21: 1-16.

Chun, S.E., M. Nagano and M.H. Lee, 2011. Ownership structure and risk taking behavior: Evidence from banks in Korea and Japan. Asian Eco. J., 25: 151-175.

Demsetz, R.S., M.R. Saidenberg, P.E. Strahan, 1996. Banks with something to lose: The disciplinary role of franchise value. Eco. Policy Rev., Vol. 2,

Garcia-Marco, T. and M.D. Robles-Fernandez, 2008. Risk-taking behaviour and ownership in the banking industry: The Spanish evidence. J. Eco. Bus., 60: 332-354.

Gonzalez, F., 2005. Bank regulation and risk-taking incentives: An international comparison of bank risk. J. Banking Finance, 29: 1153-1184.

Gorton, G. and R. Rosen, 1995. Corporate control, portfolio choice and the decline of banking. J. Finance, 50: 1377-1420.

Jensen, M.C. and W.H. Meckling, 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. J. Financial Eco., 3: 305-360.

Konishi, M. and Y. Asuda, 2004. Factors affecting bank risk taking: Evidence from Japan. J. Banking Finance, 28: 215-232.

Mohammadi, Sh., H. Ghalibaf, and M. Meshki, 2010. The effects of ownership structure(mix and concentration) on Firm's Return and value in the Tehran Stock Exchange (TSE). J. Financial Res., 11: 69-89.

Ordbacheh, H. and N.L. Pordel, 2012. The effect of ownership structure on the prudential behavior of banks in iranian banking industry. J. Econ., 11: 23-51.

Saunders, A., E. Strock and N.G. Travlos, 1990. Ownership structure, deregulation and bank risk taking. J. Finance, 20: 391-405.

Setayesh, M. H. and F. Ebrahimi, 2012. Effects of corporate governance on earnings informativeness of the companies in Tehran Stock Exchange. J. Acc. Knowl., 3: 31-48.

Sun, J. and G. Liu, 2014. Audit committees oversight of bank risk-taking. J. Banking Finance, 40: 376-387.