

## The relationship between ownership concentration and Z scores at private banks in Iran

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**Abstract:** The present study investigated the effect of the relationship between ownership structure and risky behavior in Iranian private banks. According to temporal examination of under study data, panel data econometrics (panel data) approach is selected to model the relationship between the independent and dependent variables of the banks. In this study, the financial statements data of active Iranian private banks from years between 2010 and 2013 are used, including twenty-one banks. The findings show that as concentration of ownership in the hands of the bank shareholders increases, bank risk, in particular bank's portfolio risk and bank leverage risk will increase and the bank faces a dangerous situation in which the amount of bank risk effectiveness per each unit change of ownership concentration is 0.32.

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**Key word:** Ownership structure, private banks, Corporate governance, Director or board.

### Introduction

After the recent financial crisis, the subject of ownership structure has become more and more important. The ownership structure role is important for several reasons. First, establishment of ownership structure cases an efficient use of scarce resources in the economy. Second, the resources allocated to the efficient investment. Third, ownership structure helps managers to focus on improving business performance. Fourth, ownership structure helps Managing Director or board of directors to choose the best tool for controlling scarce resources. Fifth, ownership structures force institutions to accept the rules.

Besides, the stability of the banking system is important for four reasons. First, a stable banking system provides a suitable environment for attracting deposits. Second, it helps the transmission of monetary policy. Third, a stable banking system provides efficient financial intermediation, and enables it to be more successful in investments resource allocation; thus, could enhance economic growth and investment. Fourth, existence of a stable banking system increases the efficiency of the banking system and improves the distribution of resources in the economy.

Accordingly, establishment of ownership structure in banks is important, since there is a relationship between banking system and the economic system. Therefore, in this study we will try to examine the relationship between ownership structure and Iranian private bank's risky behaviors, by using correlation techniques and approach. This paper will be written as follows:

With regard to the logical course of preparing this article, we hope that a suitable research platform

and execution guide has been provided for enthusiasts and scholars and new windows can be opened toward us and others for the more productive work ahead.

### Expressing the problem

Banks are responsible for main role of financing in developing countries. Also, these are firms having high leverage ratio, due to deposits received from customers. For the reasons mentioned above, they are more affected by regulations, so that must have more accountability to the rights of depositors, reduce their risk and ensure the stability of the payment system.

Corporate governance rules about bank ownership Restructuring reduces systemic risk and may be different from shareholder main objective of increasing value of the stock.

There is a conflict of interests between the bank depositors and shareholders. Shareholders prefer risky projects to increase the value of their stock by raising costs of depositors. To avoid a banking crisis and increase confidence of depositors and, to prevent the bankruptcy of the banking system, small depositors are insured and banks become more systematic.

It seems implementation of corporate governance in banks will help improving bank's performance, but the establishment and implementation of good corporate governance, without implementation of suitable internal control mechanisms is not possible.

Considering the importance of the issue of establishing the ownership structure of private banks, in this thesis, the effect of ownership structure on bank risk-taking will be reviewed.

### Literature

Karmanov and Vafiz (2010), by examining the effect of some corporate governance Criteria, such as characteristics of the Board of Directors and Audit

Committee, concluded that effective corporate governance improves the quality of disclosure. They assumed management anticipated profit criteria as proxy of disclosure's quality in their research and studied a sample of 275 top quality firms of Fortune magazine in America between 2000 and 1995. Bewkes and Brown (2006) in Australia, studied relation of corporate governance and various criteria of disclosure's quality, including Accuracy, unidirectional tend and inconsistent level in profit forecast analysis. Their research results showed that disclosure of firms, having good corporate governance, is more informative.

The results of Chang and Korteny (2013) study showed that if firms have better governance, their voluntary disclosure level will be more. In their research, corporate governance criterion was assumed the amount of outside managers' percentage in the Board of Directors. Also, Bizly (2006) argues that existence of outside managers in the Board of Directors improves supervision and control over financial disclosure.

Elmensir et al (2012) in their paper have studied the effect of corporate governance on the banks of the Jordan. Board size, board composition and foreign ownership criterion are considered as indicators of corporate governance. The provided results of the study suggest a positive relationship between corporate governance criteria, i.e. the number of members of the board and foreign ownership and banking system operation, in Jordan. Board size and separation of ownership from management have a negative relationship with the banking system of this country.

Peny et al (2012) in their paper have examined the impact of corporate governance of banks on crediting mortgage and the amount of doubtful receivables during the financial crisis. The results suggest that the banks having stronger corporate governance mechanism than other banks, also, their profitability indices are higher. Besides, the effect of corporate governance on crediting mortgage is complex and depends on the definition of the crisis period, although, the banks having stronger corporate governance than other banks experience less doubtful receivables. The banks having weaker corporate governance reduce their risky mortgage loans after the crisis reaches the mortgage market.

Tay (2012) examines the effect of corporate governance on banks' profitability using agency theory and 15 banks statistics in Malaysia. Return on assets and return on equity indices are considered as indicators of banks' profitability. The results of model analysis suggest that the independence of the board and the type of bank ownership have negative effect on stock returns.

Alen and et al (2011) in their study have examined the relationship between corporate governance and the existence of stability in the banking system for Europe Union member countries. For this purpose, the relationship between parent banks and their branches in other countries is studied. Many of the foreign branches have had higher liquidity than the host country domestic banks, causing instability in the banking system of the host country, by the transfer of funds to the mother country. Investigation showed that the lack of proper corporate governance rules which support host country financial market, had been caused such crisis.

Ermina and Maria (2010) in their study have examined the relationship between the performance of the banking and corporate governance of European, American, Australian and Japanese banks. The findings of this paper suggest that there is a negligible negative relationship between the bank and corporate governance, but, there is a strong positive relationship among the performance of the banking and financial leverage and economic growth. The findings of this study suggest that there is a positive relationship between domestic shareholders and bank performance, which indicates The more the held shares by bank's internal staff and board of directors and major shareholders are, the bank performance will be better.

Keem and Rasia (2010) have measured the effect of state, private and foreign ownership on the performance of banking system. The results showed that before the financial crisis, foreign owned banks had used corporate governance better than state banks and private banks; accordingly, had had better performance. But, in after the financial crisis era, private banks were more successful in implementing corporate governance than the other banks, and their performance indicators improved.

Changlu and Enji (2009) have investigated the banking system performance before and after the establishment of corporate governance rules. The results of the study suggest that the establishment of these regulations has improved the performance of the banking system. Bank stabilization measures have been considered as bank performance indicators.

#### **Methods and tools of data analysis**

In this study, the ownership structure has been defined by the special ratio and financial indicators, as an independent variable, and the risk has been calculated by using financial ratios, as the dependent variable.

First, the Pearson's correlation coefficient is used for examining the relationship between variables in each group; then we use canonical correlation analysis approach for examining the relationship between dependent and independent variables. Pearson's correlation analysis results: After obtaining this index,

the strongest observed correlations in the set of independent variables and in the dependent variables set, will be identified.

To examine whether the incentives for risk-taking banks are systematically different in all private bank with various ownership structures, following mixed regression model will be estimated:

In these models, an ownership structure variable on risk-showings is compiled in presence of control variables, where index *i* indicates commercial banks (*i*=1, 2, ..., 133), *t* is the time period (*t*=2005,2006,...,2009),  $\beta_1 \beta_2 \beta_3 \beta_4 \beta_5 \beta_6$  are parameters that must be estimated and  $\epsilon_{it}$  are errors. Dependent variable is risk and is represented by *z* score. The ownership structure is measured by two variables: ownership concentration (CONC) (households, firms, and government). is bank level for the credit risk of a vector, *i*, which represents size (SIZE), efficiency (EFF), profitability (ROA), Operating Leverage (OPELEV), lending growth (LGROW) and leverage ratio (LEVER) at time *t*.

(*control2*)<sub>*it*</sub>, the bank level for non-payment risk model includes six variables: size, efficiency, profitability, operating leverage, asset growth (AGROW) and diversity (DIVER). country level Control consists of two model economic development (GDP), inflation (INF), the development of the banking sector (CPGDP), competition in the banking system (MARP), deposit insurance (DEPINS) and shareholder rights (SHRI). To model credit risk, interest rate (IRAT) was added.

**Research purposes**

The main objective of this study is investigating the ownership structure and risky behavior of the Iranian private banks.

The objectives of this research are:

Examining the relationship between concentration of ownership and developed Z scores in Iranian private banks.

**Research questions**

Whether is there relationship between concentration of ownership and developed Z scores in the Iranian private banks?

**Hypothesis**

There is a relationship between developed Z scores and ownership concentration in the Iranian private banks.

**Research pattern estimation**

Due to the flexible regression model in this study considering the relationship between ownership structure and risky behavior is as follows:

$$Z_{it} = \alpha_t + \beta FS_{it} + \gamma X_{it} + \delta Y_t + \epsilon_{it}$$

Where *Z<sub>it</sub>* is risk of bank *i* in year *t*,  $\alpha_t$  intercept, *FS<sub>it</sub>* ownership structure of bank *i* in year *t*, *X<sub>it</sub>* related variables banking system *i* in year *t*, *Y<sub>t</sub>* macroeconomic variables bank in year *t*,  $\epsilon_{it}$  error margin of Bank *i* in year *t*.

$$Z_{it} = \alpha_t + \beta(conc_{it}) + \gamma(size_{it}, EFF_{it}, ROA_{it}, OPELEV_{it}, LGROW_{it}, LEVER_{it}) + \delta(GDP_t, InflationRate_t, IRAT) + \epsilon_{it}$$

$$Z_{it} = \alpha_t + \beta(MECONC_{it}) + \gamma(size_{it}, EFF_{it}, ROA_{it}, OPELEV_{it}, AGROW_{it}, DIVER_{it}) + \delta(GDP_t, InflationRate_t, IRAT) + \epsilon_{it}$$

More precisely, each of the above main variables groups are divided into smaller component elements considering the economic situation of Iran. About macroeconomic variables, we point to variables such as inflation rate, GDP growth and interest rates. in the case of Variables associated with the banking system, we mention bank size, bank efficiency, profitability, operating leverage, leverage ratios, loan growth, asset growth.

Before estimating the model, descriptive variables of study are examined:

**Table 1:** Descriptive statistics

	asset growth	leverage ratios	loan growth	operating leverage	Ownership concentration	profit	size	return	risk
Mean	0.204220	19.03543	0.018335	10.87919	0.105029	4.745549	0.046439	324.2504	0.663006
Median	0.150000	13.72000	0.016000	11.11000	0.110000	4.620000	0.031000	349.5000	0.690000
Maximum	1.420000	84.94000	0.172000	13.70000	300000	7.820000	0.855000	456.2500	1.000000
Minimum	0.000000	0.410000	0.001000	5.410000	0.000000	1.800000	-0.072	177.9000	0.120000
Std. Dev.	0.186841	16.83440	0.015667	1.760274	0.049809	2.029552	0.084253	88.64399	0.229821
Skewness	2.224851	1.830983	5.827570	-0.793103	0.268345	0.191018	6.723553	-0.18607	-0.247374
Kurtosis	12.65604	6.645284	55.19947	3.311937	3.987212	1.666067	57.27553	1.807728	1.827204
Jarque-Bera	814.8229	192.4487	20620.35	18.83791	9.101423	13.87842	22537.99	11.24501	11.67913
Probability	0.000000	0.000000	0.000000	0.000081	0.010560	0.000969	0.000000	0.003616	0.002910
Sum	35.33000	3293.130	3.172000	1882.100	18.17000	820.9800	8.034000	56095.32	114.7000

The above table exhibits descriptive statistics of the dependent variable, ownership structure and banking variables. As shown in the above table, the

risk variable has a mean of 0.66 and a median of 0.69 and also, standard deviation is 0.22. The amount of skewness and elongation of this variable are 0.24- and

1.82 respectively. The amount of this variable total data for the studied companies is equal to 114.7.

The ownership concentration independent variable has a mean of 0.1054, a median of 0.11, and the lowest data of 0 and the greatest data of 3. The standard deviation of the variable is 0.049 and The amount of skewness and elongation of this variable

are 0.26 and 3.98, respectively. The amount of this variable total data for the studied companies is equal to 18.17.

The equity variable has a mean of 0.06, the lowest data of 0 and the greatest data of 0.14. The median of this variable is 0.053 and the amount of skewness and elongation are 0.25 and 1.62, respectively.

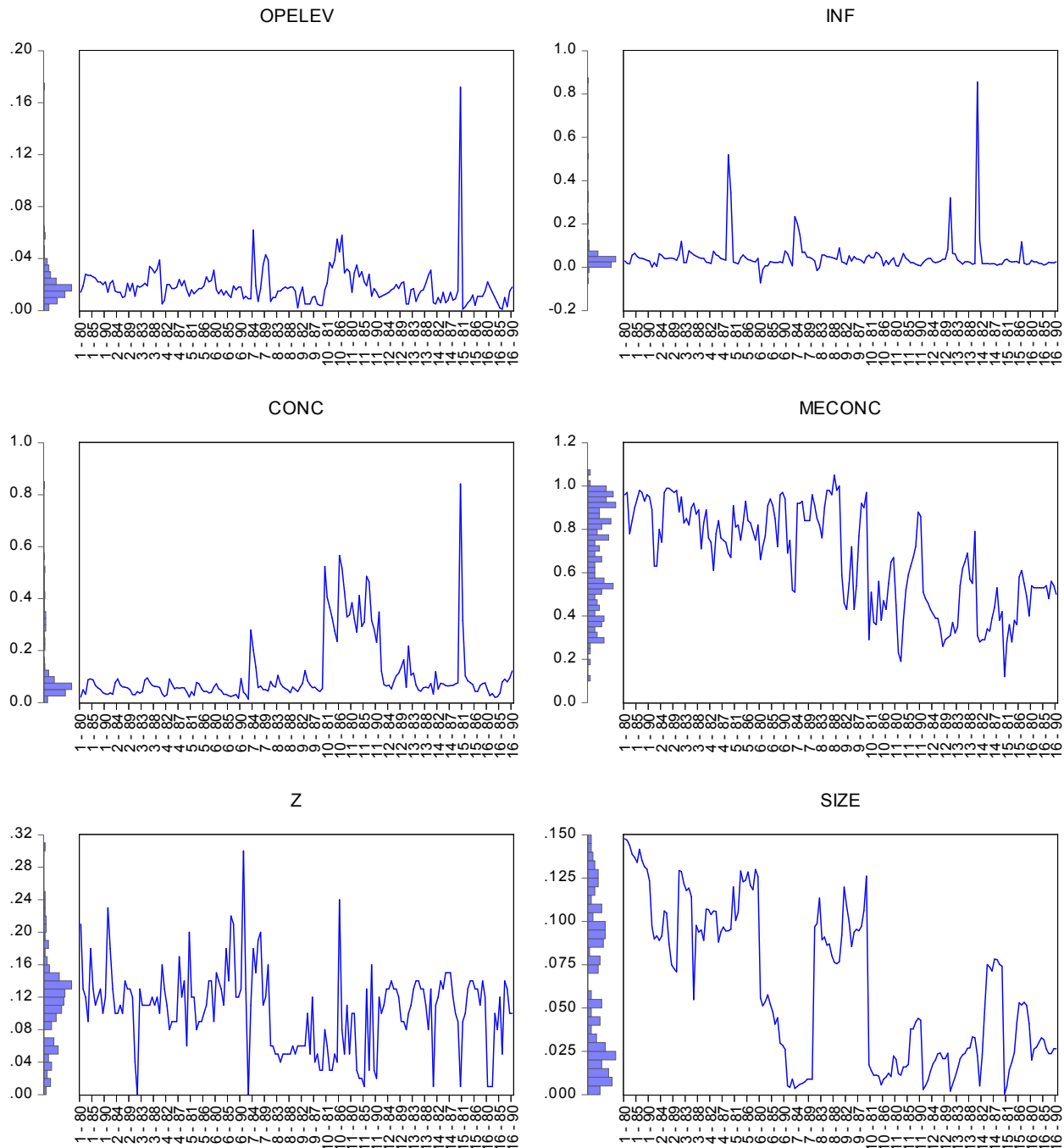


Figure 1: general diagram of the study important variables status

The above diagram exhibits the volatility of some variables in the form of histogram.

After examining descriptive statistics of variables, study variables reliability are examined by intended indices:

According to the economy literature, it is necessary consider variables semantic before estimating the model. We don't use Dicky Fuller or Philips Pron for panel data because these tests have a little potency in identifying of semantic. For insurance, we use powerful tests in panel model that collect data and consider the semantic (Andress, 2007).

In contrast, root test panel is more powerful than root test single unit. The most root tests panel that show the different results are followed:

- Levin, Lin and Chu test (LLCT)
- Im, Pesaran and Shin test (IPST)
- Breitung-type test
- Fisher-type tests using ADF and PP tests
- Fisher-type tests using ADF and PP tests
- Hadri-type test

In all of these tests, except of Hadri-type test, zero hypothesis have the same root; in Hadri-type test, zero hypothesis have the same root (Andress, 2007).

Variable semantic is showed in the follow table:

**Table 2. Variable Semantic In the Investigation**

variable	Semantic test	Time difference	Significant level	Static test	Semantic/unsemantic
Z	Levin, Lin and Chu	No difference	0.0029	-2.7562	semantic I(0)
CONC	Levin, Lin and Chu	No difference	0.0001	-3.5544	semantic I(0)
SIZE	Levin, Lin and Chu	No difference	0.0107	-2.3013	semantic I(0)
EFF	Levin, Lin and Chu	No difference	0.02	-8.1704	semantic I(0)
ROA	Levin, Lin and Chu	No difference	0.0052	-5.9874	semantic I(0)
OPELEV	Levin, Lin and Chu	No difference	0.0002	-77.009	semantic I(0)
LGROW	Levin, Lin and Chu	No difference	0.0012	-5.1260	semantic I(0)
LEVER	Levin, Lin and Chu	No difference	0.0256	-33.596	semantic I(0)
AGROW	Levin, Lin and Chu	No difference	0.0023	-5.0401	semantic I(0)
DIVER	Levin, Lin and Chu	No difference	0.02568	-6.1778	semantic I(0)
GDP	Levin, Lin and Chu	No difference	0.0356	-4.3596	semantic I(0)
INF	Levin, Lin and Chu	No difference	0	-2.1565	semantic I(0)
IRAT	Levin, Lin and Chu	No difference	0	-3.1238	semantic I(0)

Information in the above the table show all variables are no difference according to Levin, Lin and Chu and inflation rate and interest rate are man aba once difference. So, according to the difference between semantic degrees in estimation pattern, we

must approve long-term relationship in variables. For approving this factor, we use cointegration test among variables and we show it on the follow.

• **Cointegration Test**

**Table 3. Cointegration in Investigated Variables**

Alternative hypothesis: common AR coefficient (within-dimension)					
		Statistic	Prob.	Weighted	
		Statistic	Prob.	Statistic	Prob.
Panel v-Statistic		-4.402655	4.558333	-2.109016	6.822916
Panel rho-Statistic		2.016440	6.793361	2.453776	6.895166
Panel PP-Statistic		-3.005975	0.13	1.795447	0.252083
Panel ADF-Statistic		0.016631	3.518056	-3.95287	2.397222
Alternative hypothesis: individual AR coefficient. (between-dimension)					
		Statistic	Prob.		
Group rho-Statistic		3.696005	6.94375		
Group PP-Statistic		-8.595249	0		
Group ADF-Statistic		.196029-	2.932639		

For identifying long-term between the pattern variables, we use the cointegration method. Cointegration express when two or some variables are connected as theoretical, they move as coordinator and don't keep out each other. Then, there are minimum only long-term relationship between them.

Like panel root test, we use special test for panel cointegration test that they have stronger for cointegration identify in the model. The most important tests are:

1. Kao-type test that are based on Dicky Fuller statics (DF & ADF)
2. Pedroni-type tests that are based on Dicky Fuller and Philips Pron statics
3. Fisher-type tests that are showed by Madala and Voo (1999)

Among these tests, first test doing are based on Engle-Granger and the third test is based on Johansen methodology (Baltaji, 2005).

For explanation cointegration test, we use Pedroni test the results are showed in the following table.

H0 hypothesis. This hypothesis no cointegration that is based on static test and Philips Pron static and it shows the cointegration vector minimum on long-term, so H0 fail and data are in long-term balance.

**Hypothesis test by using of fitting regression model by PANEL DATA**

Fitting model between ownership structure (ownership concentration) and risk behavior in Iranian Banks

**Table 4. Used variables in the Model**

Z	Risk
CONC	ownership concentration
SIZE	Size
EFF	Profitability
ROA	Efficiency
OPELEV	Operation lever
LGROW	Loan growth
LEVER	Lever ratio
GDP	Gross Domestic Product
INF	inflation
IRAT	interest rate

According to the introduced variables, the first model is following:

**Table 5. The Result of Significant Constant Effects in Contrast with Minimum Squares Cointegration**

PV	Difference of freedom	F statics amount
5.15685	(38.526)	0

F-Limer results show that constant and accidental effects is preferable on cointegration model.

- **Hasman test**

$$\begin{aligned}
 Z_{it} &= \alpha_t + \beta(\text{conc}_{it}) \\
 &+ \gamma(\text{size}_{it}, \text{EFF}_{it}, \text{ROA}_{it}, \text{OPELEV}_{it}, \text{LGROW}_{it}, \text{LEVER}_{it}) \\
 &+ \delta(\text{GDP}_t, \text{Inflation Rate}_t, \text{IRAT}) + \varepsilon_{it}
 \end{aligned}$$

- **Estimation the first model**

In this section, we fit the model and do respective tests. Because of the model is associate with panel data, we must use the model with constant effects, accidental effects, cointegration data for this test. In constant effects, we suppose that any person or company has intercept specified and related. In the accidental effect, we suppose that the difference in companies are accidentally and it is a stock static variable. In the model associated with cointegration data, we suppose that companies don't have distinct characteristics. Now, we ask which model must choose. For this purpose, at first we estimate the model associate with constant effect and then we test H0 for all coefficients b distinction intercept in each company. If H0 fail, it means a company is different from other in intercept and for this reason, the model with constant effects is preferred than the model with cointegration data. In the second step, we use F-Limer test. H0 in this test is accidental effects would have zero variances. If this hypothesis accepted, it means these effects are equal for all companies and using of the model with cointegration data is more optimize. If in two tests noted above constant and accidental effects on cointegration model are for choosing these methods we use Hasman test.

- **Estimating the model associated with constant effects**

At first, we estimate the model with constant effect. Table 4 shows output software. In this model, we suppose each company has determination intercept. If we fail this assumption, then we must cointegration data instead of constant effects in the model because of failing the unique hypothesis and determination. In bottom, F test in table indicate at least one of intercept has significant difference since p-value is less than 5%, we can say H0 is based on un-effective in virtual variables associate with companies isn't fail and it is significant for one case. So constant effects is more preferable cointegration data in model.

F-Limer test

In two prior section we saw constant and accidental effects are preferable on cointegration model. Now we ask which one we must use. We use Hasman test for choosing constant effects and

accidental effects on model. For reasonable explanation this test, we supposed in accidental effects on model, added accidental agent for personal covering isn't correlated with other independent variables while it was correlated with other independent variables. Accidental affect in the model won't compatible and we must regression with constant effect. If this agent isn't in connected with independent variables, the model with accidental effects will be compatible. In this situation, regression with constant effects is compatible but it has less efficiency than the regression with accidental effects because of estimating more parameters than accidental effects. If accidental agent has connected with independent variable, it must inordinate difference in two model with constant and inconstant effects. Actually Hasman test consider the

difference in coefficient in two regressions. Hasman results has shown in tables 4-6.

**Table 6. The Results of Hasman Test for Choosing of Accidental and Constant Effects in First Model**

F	Difference of freedom (DF)	PV
19.2568	9	0.0111

Because of f static test is less 5%, we can say H0 fail because of systematic difference in coefficient and so constant effects in the model has more efficiency then accidental effects and we use constant effects in regression.

A: Specification and Interpretation the first model

In the past section, we considered constant effects in the model.

**Table7. The Result of the Model Estimation by Using Constant Effects (dependent variable: Bank Risk)**

variables		coefficient	deviation standard	T	Significant level in test	The results
CONC	Ownership concentration	0.32237	0.06325	5.0746	0	It is effective
SIZE	Size	6.2728	2.7168	5.3088	0.0225	It is effective
EFF	Proficiency	-1.6101	15.663	-1.1040	0.9173	It isn't effective
ROA	Efficiency	3.10567	18.525	1.67642	0.0961	It is effective
OPELEV	Operation lever	-8.7372	32.943	-2.6521	0.009	It is effective
LGROW	Loan growth	.072706	0.3650	1.9915	0.0485	It is effective
LEVER	Lever ratio	7.68255	32.742	2.34637	0.0205	It is effective
GDP	Gross domestic product	-3.3317	15.765	-2.1133	0.0365	It is effective
INF	inflation	2.1881	9.6682	-2.2632	0.0253	It is effective
IRAT	Interest rate	-1.8079	0.5353	-3.3773	0.001	It is effective
Dooriin Watson static				1.85	Errors aren't correlated in model	
Identify model coefficient				0.79	79% risk variations in companies express by independent variables	

The results of estimation model by constant effects regression, dependent variable: company value, show that determination model coefficient is 0.96. It means 96 percent of variable changes is dependent of company value and express by significant variables in model. Doriin Watson statics is 1.67 and it is between 1.5 until 2.5, so we deduce the errors in model aren't correlated.

Since p-value owner nature coefficient significant test is less 5% we can say H0 fail in 5 percent levels and owner nature variable coefficient is significant and positive. If one unit add, bank risk will enhance by 0.45 in unit.

So, the hypothesis based on significant relationship approve between owner nature and bank risk.

- Since p-value for significant test in SIZE coefficient is less 5%, we can say H0 has failed and this coefficient is significant in model. In

consequence, SIZE variable has positive effect on Z as 1.235 in each unit.

- Since p-value in significant test EFF coefficient is less 5%, we can say H0 based on insignificant coefficient fails in 5% level and EFF is significant. Effective value in up pattern is -6.63.

- Because of p-value in significant test ROA coefficient is more 5%, we can say H0 is approved in 5% level and ROA isn't significant in the model.

- Because of p-value is less 5% in OPELEV coefficient significant test, we can say H0 based on insignificant coefficient fails in 5% level and OPELEV is positive and significant.

- Significant level for growth variable is less 0.05, so this variable has positive and significant effect on bank risk.

- Diverse coefficient (DIVER) is less 0.05 and it has positive effect on dependent risk variable. So,

by adding one unit in variable enhance risk variable as 5 unit.

- Inflation rate and interest rate have significant effects in  $p > 0.05$  and the negative coefficient show negative variables effective on dependent variable in company risk.

- Gross domestic product variable has negative and significant effect on bank risk as 12.25 in each unit.

The results of the investigation is followed as:

Size bank variable (SIZE) has significant and positive effect on risk as 0.7. Banks have more property have more capacity for loaning and their efficiencies as same as enhance. On the other words, we hope to enhance profitability by enhancing in natural logarithm. This enhancing in profitability and value creation provide a margin for owners and immunity these commitments in subject of risks.

Gross domestic product (GDP) has negative and significant effect on bank risk. On the other words, by enhancing in economic growth and economical companies income improvement, requirement to financial requests than internal resources in companies

has enhanced and they use external financial sources for financial requests. As a results, in addition reduction in their requests for bank facilities (and reduction in outstanding claims for granting facilities) their abilities in paying for the received facilities increases and all of them reduce bank property risk.

- Necessary test
- Isotropy test remain variances

One of regression hypothesis classical models is isotropy remain variance that is essential hypothesis in each relationship. For considering of dissimilar variance hypothesis in the investigation, we have used White Test. The results of no variance dissimilar are showed in appendix (1).

The summary of results in the test are showed in following table.

H0 and its against hypothesis is defined in this test:

- { H0: error variances are the same
- { H1: error variances aren't the same

**Table 8. The Result of dissimilar Remain Variances**

H0 and H1 hypothesis	p-value	R statics	F static	result
H0 similar variance	.520	.023	.125	H0 acceptance
H1 dissimilar variance				

In this test, H0 express similar variance and because of  $p > 0.05$ , so H0 accept and it indicates there aren't dissimilar variance.

**hypothesis**

There are significant relationship among owner concentration and risk z developed in private banks.

In spite of positive and significant effect of owner concentration (CONC) on bank risks, we can analyze as owner concentration among special investors enhances, bank risks and lever risks in bank enhances and bank will subject to the danger. Interaction rate risk in bank is 0.32 per change in owner concentration.

So, first hypothesis approved.

**Suggestions for present study and other researches**

Based on obtain results, bank managers should launch management committees and Asset Liability Committee (ALCO) managements until make optimized combination of property with lowest risks and in addition, yearly financial reports, other management reports show for associated risks with bank activities.

Second section- associated suggestion for future researches

1. We suggest present study do other selection governmental banks and the results compare with present research.

2. We suggest that ownership structure effects in selected banks consider as long-term and extract as long-term and short-term

3. The relationship among Asset Liability Committee (ALCO) in banks considers with other present risks in bank industry

**Restriction and limitation**

Problems, limitation and restriction in this research are as following:

- No financial statements in the considered banks between periods are less than one year (for example as seasonal or monthly) for more accurate research and risk estimation and changing of Asset Liability in banks in this sections.

- Information weakness in the Iranian banks in spite of no paying risk calculations because of no correct categories in Asset and liability

- No access to different demands and debts layer information in banks for considering of non-matching maturities.

- No disclosure calculations for bank risks and no enough information for bank risk calculations, such as liquidity risk, and no paying risk for commitments in banks.



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