

## Study of the Relationship between Ownership Structure and Inventories Management of the Companies Listed in Tehran Stock Exchange

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**Abstract:** This study aims to explore the relationship between ownership structure and inventory management of the companies listed in Tehran Stock Exchange based on the data obtained from 112 companies during the period 2009 to 2013. This research is a descriptive correlational applied research in which to approve or reject the hypotheses, historical data and statistical methods have been used. In this study, the relationship between the independent variables and the dependent variable was analyzed using logistic regression models. In this method, panel data were used to estimate the model. In the inferential level, in order to answer the research hypotheses and to find specific relationships among research variables, regression analysis, significance T test and significant F test will be used. In this study, Eviews statistical software is used to test the hypotheses. The results obtained showed that there is a significant relationship between management ownership and the board size and inventories management in the companies listed in the Stock Exchange and there is no significant relationship between institutional ownership and inventories management in the companies listed in the Stock Exchange. Also, there is a significant relationship between structure of ownership and inventories management in the companies listed in the stock exchange.

**Key words:** Ownership structure, Institutional ownership, Managerial ownership, Board size

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### 1. Introduction

Forming a limited liability company and opening the company ownership to the public affects considerably on the method of corporate governance. The market system is organized in such a way that the owners of the company appoint the company's governance to the company's managers. The separation of ownership from management leads to the generalization of corporate governance problem. In this regard, the conflict between maximizing profits to employers and agents are hypothesized. The solution of corporate governance problem somewhat provides the reassuring of shareholders that managers seek to maximize their wealth (Qalibaf Asi, 2008). One of the issues paid much attention to it in recent decades in various industries in developed countries is the issue of maintenance of inventories of raw materials and commodities. Until recently, the necessity of an efficient management of inventories to protect them against possible theft and waste as well as the use of an appropriate method of inventory turnover was considered. Inventory holding in the company will bear a heavy burden that does not create additional value. In response to this problem, inventory management system has been raised that its basis is to reduce inventory levels in the company to zero.

This system has long been implemented in developed countries and the benefits of its application have been proven. However, it is still not applied in all aspects of our industry. Inventory

management system, with the benefits that creates for the organization, requires appropriate preparation and long-term planning and creating a perfect space to be implemented well. One of these grounds is the ownership structure; ownership structure is one of the governance internal mechanisms. Corporate governance is one of the major components of growth. However, corporate governance has been ignored in economic literature (Lee, 2008). On the other hand, property rights, as an inherent phenomenon that has been approved in social legislations, has been raised since ancient times and communities have organized their economic activities based on the acceptance of its various forms. The main topic in discussion of ownership structure is the corporate governance problem. Because the conflict of interest between managers and shareholders leads to the costs of corporate governance. Dispersed (decentralized) ownership causes the corporate governance problem in the companies that the ability and incentives of shareholders to control management will be weak because their contribution is small (Fazlzadeh et al., 2010). In addition, investors often invest in different companies to reduce risk through diversification. In fact, they invest in the hope of future profits of their stock portfolio, not in the hope of a better future of a specific company. Moreover, dispersed shareholders has not the ability to effectively control management because of insufficient information and expertise necessary to make the right decision. In contrast, concentrated

ownership creates motivation significantly in major stakeholders and in parallel to increase their share in the company, they are motivated more to improve the operation and control management. Better inventory management means keeping the minimum inventory in the company and selling its maximum amount in order to make a profit. This study seeks to identify and study the relationship between ownership structure (institutional ownership, managerial ownership and the size of the board) and inventory management systems in companies listed in Tehran Stock Exchange.

### **1.1. Research Objectives**

#### **General Objectives**

Determining the relationship between ownership structure and inventories management in companies listed in Tehran Stock Exchange.

#### **Secondary objectives**

Determining the relationship between institutional ownership and inventories management of the companies listed in Tehran Stock Exchange

Determining the relationship between managerial ownership and inventories management of the companies listed in Tehran Stock Exchange

Determining the relationship between the board size and inventories management of the companies listed in Tehran Stock Exchange

### **2. Theoretical Foundations and literature Review**

Nature of the relationship between ownership structure and firm performance is rooted in corporate governance literature (corporate governance). Review of the literature shows there is no agreed definition of corporate governance. There are significant differences in the definitions given in each country. Definitions of corporate governance in a broad range includes limited views in one hand and a broader perspective on the other. In view of the limited views, corporate governance is limited to the company and shareholders (Fazlzadeh., et al., 2010). This is an old pattern represented in corporate governance. Across the spectrum, corporate governance can be seen as a network of relationships that exists not only between companies and their owners (shareholders), but also between the company and a large number of stakeholders, including employees, customers, suppliers and bondholders. Such a view is expressed in terms of stakeholder theory (Hasas Yeganeh, 2005).

Namazi and Ebrahimi (2013) examined the impact of ownership structure and composition of the board of directors on technical efficiency of the companies listed in the Stock Exchange. They first determined technical efficiency of the companies using data envelopment analysis (DEA) and then

investigated the relationship between ownership concentration, institutional ownership, and composition of the board with technical efficiency. The sample consisted of 82 companies during the period 2002-2009. The results of the test indicate that after controlling for other factors that influence the efficiency, there is a significant positive relationship between institutional ownership and technical efficiency. However, there is a non-significant positive relationship between ownership concentration and composition of the Board of Directors with technical performance.

Setayesh and Ebrahimi (2012) examined the impact of ownership concentration variables, management property, institutional ownership, corporate ownership, board composition and size of the board of directors on the earnings response coefficient. Research findings indicate that there is a significant positive relationship between the earning information content and ownership concentration and institutional ownership. However, no evidence found on existing a significant relationship between the variables of managerial ownership, institutional ownership, corporate ownership, the composition of the board and size of the Board of Directors with earning information content.

Namazi et.al (2012) examined the relationship between changes in inventory, profitability and value of companies listed in Tehran Stock Exchange. The results indicate a significant inverse relationship between changes in inventories and short-term changes in the company's profits and changes in the value of the company. The results of the test showed the lack of a significant relationship between changes in inventories with long-term changes in corporate profits and changes in corporate assets. Also, there is no significant relationship between control variables with changes in inventories, profitability and corporate value.

In his article entitled examining the relationship between ownership structure and profits management, Esta (2011) found the following results: The purpose of this study was to investigate the ownership structure of the company on profit management method. Because previous studies have neglected the effect of corporate governance, ownership structure are classified into four categories: institutional, corporate, managerial and external ownership. The research results indicate that there is a significant negative relationship between institutional ownership and property management with manage earnings, but there is a significant positive relationship between corporate ownership and earnings management.

Hashemi and Kamali (2011) examined the impact of institutional investors on the information content of future profits using response coefficients model of future earnings. The results show that there is a negative relationship between institutional ownership and content information of future profits.

In his study titled ownership structure and dividend policy, Thanatawee (2014) achieved the following results: This study aimed to evaluate the

effect of ownership structure and dividend policy of the Stock Exchange Company of Shanghai, China in the period 2001-2007. Hypotheses results showed that firms with higher institutional ownership and ownership concentration and ownership of public sector are likely to be more successful in the dividend payments. Also there is a significant relationship between the powers of dividends payment with ownership.

In a study entitled independent audit quality and ownership structure, Kouaib, A, Jarboui, A (2014) achieved the following results: This study aimed to evaluate the effect of ownership structure and its impact on audit quality in the companies listed in Tunis Stock Exchange. The results showed that managerial ownership is effective on audit quality. Also, concentrated ownership has a negative impact on audit quality.

Basu & Wang (2011) investigated the relationship between changes in inventories, profits and enterprise value. Having been examined the observations between 1950 and 2005, their results showed that there is a negative relationship between changes in inventories and firm performance. Liao and colleagues (2010) examined the relationship between performance, productivity and ownership structure of Taiwanese brokerage firms. Their results showed that there is no correlation between the size of the board, the percentage of Property Board and management ownership percentage with efficiency. However, there is a significant relationship between major shareholders outside the organization and efficiency.

Bao & Bao (2004) studied the effects of knowledge of changes in inventories on the valuation of companies. They divided 828 companies between the years 1985 to 1998 into two groups: The first group of companies with useful information about changes in inventories and the second group, other companies. The results of the study showed that knowledge of changes in inventories for the valuation of the company is very useful.

### 3. Research hypotheses

The main hypothesis: there is a significant relationship between ownership structure and inventories management.

The first sub-hypothesis: there is a significant relationship between institutional ownership and inventories management.

The second sub-hypothesis: there is a significant relationship between property management and inventories management.

The third sub-hypothesis: there is a significant relationship between the size of the board and inventories management.

### 4. Research Method

This is an empirical study in the field of PAT investigators that is based on the actual data of financial statements of the companies listed in

Tehran Stock Exchange. This is a descriptive correlational research in which to approve or reject the hypothesis, historical data of the companies and statistical methods were used. In addition, the literature review in relation to the theoretical foundations and theoretical concepts and review of records is done. Based on information gathered through the data, verifying hypotheses and testing the results was generalized to the entire satirical population. In this study, the relationship between the independent variables and the dependent variable was analyzed using logistic regression models and considering the research hypotheses, multivariate regression model was used. Also, fusion data techniques are used to estimate models of the study.

In this method, panel data were used to estimate the model. In this research, descriptive and inferential methods are used to analyze the data. In the descriptive level, using statistical characteristics such as frequency, mean and standard deviation, the general characteristic of society is studied and to answer the research hypotheses and to find specific relationships between variables, regression analysis, significance T test and significant F test will be used in inferential level. In this study, Eviews statistical software was used to test hypotheses.

#### 4.1. Statistical population and sampling method

The statistical population of this study consists of the companies listed in Tehran Stock Exchange. The sampling method is elimination such that to estimate research models, the companies which have the following conditions is considered the part of statistical community and those companies that do not have these conditions are eliminated from the statistical sample. These conditions are as follows:

- The time period is five years between 2009 to 2013.
- To enhance comparability, their fiscal leading year leads to the final March.
- • Throughout the period of the study, it was among the companies listed in Tehran Stock Exchange.
- It should not be one of the members of financial intermediaries companies, the holding company (parent) and banks.
- It should not be those losing companies.
- It should not have a three-month hiatus.

Therefore, collecting data was limited to companies that meet the above conditions, which led to the selection of a sample of 112 specimens from companies with complete data. These number of companies will be investigated as research samples. The following table summarily shows research sampling method:

Explanation	Number	
Members of statistical community by the end of 2012	551	Total
Companies whose financial year ended 12.29	342	Filter

Companies that are not classified as investment industry, banks and financial intermediaries	331	Filter
Companies that are not part of the losing companies.	276	Filter
Total companies eliminated from the statistical community	439	Total filter
Companies that were accepted in Stock Exchange before March 20, 2008 or have been out of Stock Exchange Panel after March 19, 2013 and in all phases of research are among the companies listed in Tehran Stock Exchange.	112	Remained
Total companies of statistical sample member	112	Remained

## 4.2. Research Variables

### 4.2.1. Independent Variables

**INST:** Institutional ownership percentage of ordinary shares in the Company I and during the period t

**SB:** The number of board members in the company I and during the period t

**MGR:** Managerial ownership of ordinary shares in the Company I and during the period t

### 4.2.2. Dependent variable

#### Inventories Management

Average stock available for sale for the company I and during the period t shows appropriate management of inventories. Average inventories to sales reflect the company's ability to maintain a minimum balance of the company. The increase in this ratio indicates poor company's inventory management.

### 4.2.3. Control variables

Size= Company size (the natural logarithm of the market value of equity of firm i over the sample period)

DEBT= Leverage ratio of long-term debt to total assets

PB= Growth index (the ratio of market value to book value of equity)

ROS= Operational profitability index (average return on sales of firm i over the sample period)

STcash= Standard deviation of liquidity (average working capital)

: The error term

The test of regression model is in the way that F test statistic with the value obtained from Table F in the % with K degrees of freedom and n - k - 1 are compared. If the test statistic is greater than the

number obtained from the Table, hypothesis HO is rejected and significant estimated regression models are verified.

## 4.4. Descriptive statistics of research data

In this section, descriptive statistics of the variables used in this study will be presented. For data analysis, Software Eviews7 software has been used. Table 1 shows a summary of the descriptive statistics of the variables.

**Table 1:** Results of Descriptive statistics (firms listed in Tehran Stock Exchange)

INVENTORY	MGR	SB	INST	
2/7205	1/0428	0/721	%82	Mean
1/756	0/751	281%	48%	SD

According to the results presented in Table (4-1), SD of inventories variable, indicating the degree of dispersion of the data around the mean, is high, which it is important to indicate that the study group has less heterogeneity in terms of the features being measured and differences in inventory management or the qualitative features of the dependent variable in this study is high. Other variables approximately has lower standard deviation and represents less dispersion around the mean and express more heterogeneity of these variables.

## 4.4. Results of model estimation

### 4.4.1. Unit root test reliability

In the common econometric methods, any estimate is provided to ensure the reliability of the variables (Noferesti, 1989). For panel data models, the problem of spurious regression also applies as the case of time series models. Then, applications of unit root test in combinational models is necessary. It is required that unit root tests is done for individual parameters to ensure convergence. When the panel data methods is used, Levin, Lin and Chu, Breitung, Im, Pesaran and Shin, Fisher-type tests using ADF and PP tests, generalized Dickie Fuller and Hadri are used to evaluate the reliability of the variables. In this study, Levin, Lin and Chu tests has been used.

Results of static test of the variables show that according to the test statistic and confidence level achieved for each variable (Prob), which is less than 0.05, all variables are significant in the present study. In addition to static variables, there is a possibility of spurious regression. To avoid spurious situations regression, co-integration test has been used as a pre-test. Thus, the results can be trusted only in the co-integration situation of variables. To verify the existence of co-integration between variables, Fisher Johnson Test has been used.

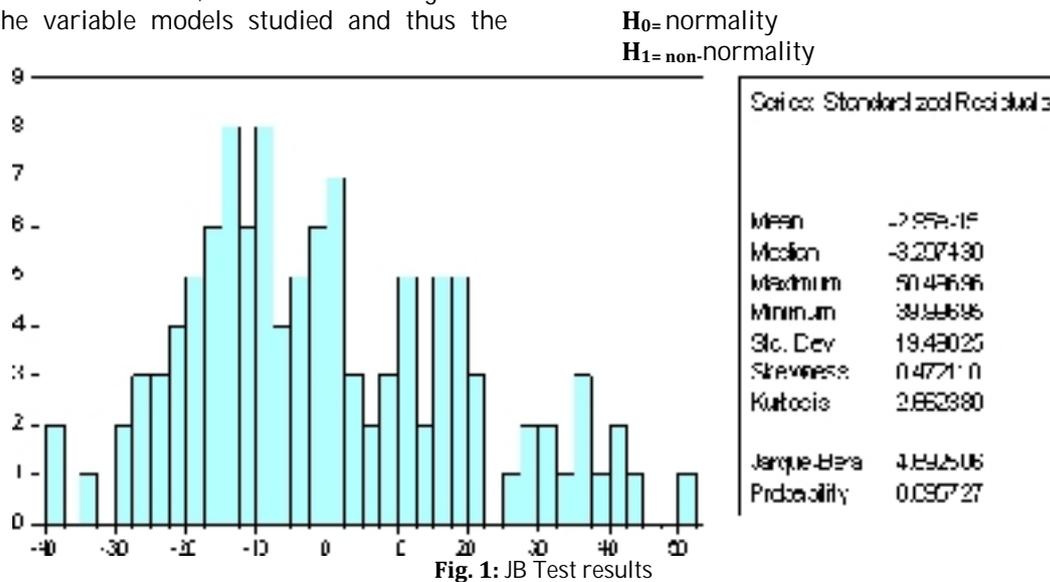
**Table 2:** Results of Levin, Lin and Chu unit root tests

LLC TEST (Levin, Lin and Chu unit root tests)		
Variable	Statistics	Prob.
INST	-2/401	0/0013
SB	-2/412	0/0052
MGR	-4/082	0/0001
Inventory	-3/752	0/000

**Table 3:** Results of co-integration test

Fisher Johnson Test		
Hypothesis testing	Statistics	Prob.
H0: no cointegration	10/41	0/000

As shown in Table 3, there is a Cointegration among the variable models studied and thus the



Normal test results of the residual sentences indicate that hypothesis H0 is approved and estimation model residues is normally distributed (p-value > 0.05).

**4.4.3. Correlation coefficients (Pearson) between the independent variables**

**Table 4:** Results of correlation test (collinearity)

Inventory	MGR	SB	INST	Variable
0/082	0/0192	0/024	-	INST
-0/041	0/108	-	0/024	SB
-0/079	-	0/108	0/0192	MGR
-	-0/079	-0/041	0/082	Inventory

According to the results presented in the above table, the correlations between the independent variables is not to the extent that it could be seen as a high correlation. So, it can be overlooked.

**4.4.4. Variance Heteroscedasticity Test**

In order to conduct variance Heteroscedasticity test, likelihood ratio test was used. The results of this test are shown in Table 5.

estimated regression is not the spurious regression and can be used in estimation coefficients.

**4.4.2. Test of error terms normality**

One of the assumptions discussed in the regression estimation in OLS method is the normal distribution of residual values of model estimation. The non-normal distribution of residuals has no effect on the performance of the estimated coefficients and solely related to the reliability of the model and has no impact on the estimation results. To test the normality of the error terms, Jarque-Bera statistics is used, which the test hypothesis is as follows:

**H<sub>0</sub> = normality**  
**H<sub>1</sub> = non-normality**

**Table 5:** Results of variance Heteroscedasticity Test

Statistics	Amount of statistics	Significance level
Likelihood ratio	3/071	0/1052

hypothesis is that there is no variance Heteroscedasticity. Due to the significance level (prob > 0.05) hypothesis H0 is accepted. H1 hypothesis is rejected. Therefore, the regression is the lack of variance Heteroscedasticity at the significance level of 5%.

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**4.5. Introducing Research Model**

Finally, the theoretical model applied in this study to estimate and test hypotheses will be discussed.

Based on the theoretical and empirical literature in this field, the following model is represented for this research as follows:

**Regression Model:**

To investigate the effect of ownership structure on the inventories management of the companies listed in Tehran Stock Exchange, following linear equation is used.

Relationship 3.1: regression analysis and F Test (Fisher) T Test (t student) to test the hypotheses is used.

The regression model used in this study is as follows:

$$\text{Inventory} = \alpha_0 + \alpha_1 \text{INST} + \alpha_2 \text{SB} + \alpha_3 \text{MGR} +$$

The following model taking into account the control variables is as follows:

$$\text{Inventory} = \beta_0 + \beta_1 \text{INST} + \beta_2 \text{SB} + \beta_3 \text{MGR} + \beta_4 \text{Size} + \beta_5 \text{EBT} + \beta_6 \text{PB} + \beta_7 \text{ROS} + \beta_8 \text{STcash} + \epsilon$$

**Chow test**

Chow test is used to determine fixed effect model for the integration of the data

H0: integrated data model

H1: fixed effects model

Chow test statistic based on the sum of restricted and unrestricted square error model is as follows:

$$\frac{(RRSS - URSS) / (N - 1)}{(URSS) / (NT - N - NK)}$$

Chow =  $\frac{(URSS) / (NT - N - NK)}$

This statistic has an F distribution with N-1 and NT-NK degrees of freedom. If the restricted statistical value F is less than F statistical value of the table, the hypothesis H0 is rejected in the determined significance level and it has significant impacts on the sections and the fixed effects model will be selected. Otherwise, the integrated data model is used. Chow test results are shown in Table 6. The results for the model presented in this study indicate that both F and chi-square statistic is significant at the 05% significance level. Therefore, the null hypothesis indicating the need to use the pooled model is not accepted and the model must be estimated based on panel data.

**Table 6:** Results of the Chow test (Restricted F test) for the research model

Statistics	Statistical value	Prob.
Restricted F	6/412	0/000
Chi <sup>2</sup>	10/424	0/000

After the appropriate model to estimate the panel was detected, it is necessary to determine the appropriate method for testing among the fixed effects and random effects methods. For this purpose, the Hausman test is used which its results for the research model is as Table 7.

Hausman test results are shown in Table 7. These results indicate that the chi-square statistic is significant at the 1% level of significance. Therefore, the null hypothesis that indicating the use of gradient effects is not accepted and the model should be estimated based on the fixed effects model.

**Table 7:** Results of the Hausman test

Statistics	Statistical value	Prob.
Hausman	14/051	0/000

**4.6. The final model estimation and testing hypotheses**

Given the various tests conducted in the previous models, the final models to assess the impact is estimated.

1. There is a significant relationship between ownership structure and inventories management.
2. There is a significant relationship between institutional ownership and inventories management.
3. There is a significant relationship between property management and inventories management.
4. There is a significant relationship between the size of the board and inventories management.

Results of regression test based on fixed effects method are summarized in Tables 8, 9, 10, 11.

**Testing Hypothesis**

**4.6.1. Secondary hypotheses**

-The first hypothesis indicating that the relationship between institutional ownership and inventories management of the companies listed on the stock exchange is significant.

H0 = There is no significant relationship between institutional ownership and inventory management

H1 = There is a significant relationship between institutional ownership and inventory management.

According to the results presented in Table 8, it can be represented that Based on the estimated coefficient for this variable that is equal to 3.014, there is a positive relationship between institutional ownership and inventory management. On the other hand, the accuracy in the significance level of this variable can be observed in that the calculated Prob equals 0.124. Thus, the significant correlation between these two variables cannot be verified. Accordingly, the first hypothesis of this study indicating a significant correlation between imbalanced economical supply and demand and turmoil in the market is not confirmed.

-The second hypothesis indicating the ownership management and inventory management in the companies listed in the stock exchange is significant.

H0 = there is no significant relationship between management ownership and inventory management.

H1 = there is a significant relationship between management ownership and inventory management

**Table 8:** Results of regression analysis using a fixed effects model 1

Variable	Determination coefficient	SD	Calculated T	Significance level
<b>Institutional ownership C</b>	3/014	1/1205	2/432	0/213
	-12/453	-5/256	0/3465	0/562
<b>Coefficient R</b>	0/362	Significance level (F-statistic)		0/124
<b>Square R</b>	0/457	Watson-Durbin Test		2/34
<b>Statistics F</b>	2/362			

**Table 9:** Results of regression analysis using a fixed effects model 2

Variable	Determination coefficient	SD	Calculated T	Significance level
<b>Managerial ownership C</b>	1/152	0/1025	2/752	0/0059
	5/345	1/364	7/357	0/437
<b>Coefficient R</b>	0/765	(F-statistic) Significance level		0/000
<b>Square R</b>	0/342	Watson-Durbin Test		1/986
<b>F Statistics</b>	2/458			

Studying the results of Table 9 for the second hypothesis, which states that there is a significant relationship managerial ownership and inventories management indicates that Since Prob calculated for managerial ownership variable is equal to 0.0059, so, there is a significant correlation between these two variables at 95 percent and on the other hand, for the accuracy in the estimated coefficient is equal to 1.152, it suggests a positive correlation between these two variables. Thus, results of second hypothesis of the study indicating a significant

relationship between managerial ownership and inventory management is confirmed.

-The third hypothesis indicating a significant relationship between the size of board and inventories in the companies listed on the stock exchange is significant.

H0 = there is no significant relationship between the size of the board and inventories management

H1 = there is a significant relationship between the size of the board and inventories management

**Table 10:** Regression results using fixed effects model 3

Variable	Determination coefficient	SD	Calculated T	Significance level
<b>Board size C</b>	3/345	0/326	3/547	0/0001
	-4/235	2/245	0/4564	0/325
<b>Coefficient R</b>	0/457	Significance level (F-statistic)		0/000
<b>Square R</b>	0/436	Watson-Durbin Test		2/432
<b>Statistics F</b>	2/356			

Regarding the third hypothesis about a significant relationship between the board size and inventories management according to the results of Table 10, it is observed that Prob calculated for this variable is equal to 0.0001 which indicates a significant relationship between the board size and inventories management at 95% confidence level. Also, observing the estimated coefficient for the board size variable that is equal to 3.345, a positive relationship is established between the board size and inventories management, that given the calculated Prob, this relationship is significant. Hence, it can be stated that research hypothesis No. 3 that there is a significant relationship between the board size and inventories management is approved in 95% confidence level and there is a significant relationship between these two variables.

H0 = there is no significant relationship between ownership structure and inventory management

H1 = there is a significant relationship between ownership structure and inventories management.

Studying the results of Table 11 to test the main hypothesis indicates that there is a significant relationship between ownership structure and inventory management. It suggests that since Prob calculated for this variable is equal to 0.0015, so there is a significant correlation between these two variables at 95%. On the other hand, accuracy in the estimated coefficient that equals to 3.051 indicates a positive relationship between these two variables. The results of the research hypothesis that a significant relationship between ownership structure and inventory management is confirmed.

As can be seen from the table above, adjusted coefficient of determination obtained in research

models is 0.36, 0.76 and 0.54, respectively and this means that approximately 36% of the changes of institutional ownership and almost 76% of changes of managerial ownership and 45% of board size is effective on inventories management. F Test

**4.6.2. Main hypothesis**

There is a significant relationship between ownership structure and inventories management of the companies listed in the Stock Exchange.

assessed the overall estimated regression line. The F statistics obtained for each of the models are 2.36, 2.45, 3.35 and 4.67, respectively and its concept is that H0 hypothesis indicating that all zero hypotheses are rejected and its contrary assumption i.e.H1. This means that the total regression line is significant.

**47. Research control variables and inventories management**

In this research, control variables for influencing the external and internal factors on inventory

management in companies listed in Tehran Stock Exchange have been used and review and analysis of these variables is as follows:

*There is a significant relationship between the firm size and the inventories management of the companies listed on the stock exchange.*

H0 = there is no significant relationship between firm size and inventory management

H1 = there is a significant relationship between the firm size and inventory management

**Table 11:** Results of regression analysis using a fixed effects model 4

Variable	Determination coefficient	SD	Calculated T	Significance level
Institutional ownership C	3/051	2/4201	1/541	0/0015
	-3/4258	3/4202	0/326	0/532
Coefficient R Square R	0/865	(F-statistic) Significance level		0/000
	0/986	Watson-Durbin Test		2/245
F Statistics	4/678			

**Table 12:** Results of regression test in fixed effects method of firm size variable

Variable	Determination coefficient	SD	Calculated T	Significance level
Firm size C	1/743	1/4675	1/0745	0/00182
	-5/2345	2/6743	0/467	0/532
Coefficient R Square R	0/2351	(F-statistic) Significance level		0/000
	0/456	Watson-Durbin Test		2/089
F Statistics	1/7643			

The results of Table 12 to test the relationship between firm size and inventory management suggests that Since Prob calculated for this variable is equal to 0.00182, so, there is a significant correlation between these two variables at 95%. On the other hand, for the accuracy in the coefficient estimated to be equal 1.74, it suggests a positive correlation between these two variables. Therefore, the significant relationship between firm size and inventory management is confirmed.

There is a significant relationship between the leverage and inventory management of the companies listed in the stock exchange.

H0 = there is no significant relationship between leverage and inventory management

H1 = there is a significant relational between leverage and inventories management

**Table 13:** Results of regression testing in the effects of fixed effect variable leverage method

Variable	Determination coefficient	SD	Calculated T	Significance level
Leverage C	1/985	1/0015	0/5202	0/1925
	-4/2354	0/6342	0/623	0/532
Coefficient R Square R	0/1643	(F-statistic) Significance level		0/124
	0/478	Watson-Durbin Test		2/423
F Statistics	2/1254			

The results of Table 13 to test the relationship between leverage and inventory management suggests that Since Prob calculated for this variable is equal to 0/1925, so, there is no significant correlation between these two variables at 95%. On the other hand, for the accuracy in the coefficient estimated to be equal 1.98, it suggests a positive correlation between these two variables. Therefore, given the significance relationship, this relationship is not significant. Thus, the significant relationship

between firm size and inventory management is not supported.

There is a significant relationship between the growth index and inventory management of the companies listed in the stock exchange.

H0 = There is no significant relationship between growth index and inventory management

H1 = there is a significant relationship between the growth index and inventory management

**Table 14:** results of regression testing in the effects of fixed effect of growth index variable

Variable	Determination coefficient	SD	Calculated T	Significance level
Growth index	1/0014	0/70251	2/10157	0/0001
C	-3/873	1/876	0/873	0/827
Coefficient R	0/4687	(F-statistic) Significance level		0/000
Square R	0/4531	Watson-Durbin Test		1/921
F Statistics	1/862			

The results of Table 14 to test the relationship between growth index and inventory management suggests that Since Prob calculated for this variable is equal to 00010/, so, there is no significant correlation between these two variables at 95%. On the other hand, for the accuracy in the coefficient estimated to be equal 1.0014, it suggests a positive correlation between these two variables. Thus, the significant relationship between firm size and inventory management is supported.

*There is a significant relationship between the operational profit and inventory management of the companies listed in the stock exchange.*

H0 = there is no significant relationship between the indicator of operational profit and inventory management

H1 = there is a significant relationship between the indicator of operational profit and inventory management,

**Table 15:** Results of regression analysis using fixed effects of profitability variable

Variable	Determination coefficient	SD	Calculated T	Significance level
Operational profitability index	3/3456	1/2563	5/3256	0/0000
C	-6/4575	1/4374	0/3467	0/394
Coefficient R	0/7904	(F-statistic) Significance level		0/000
Square R	0/4823	Watson-Durbin Test		1/054
F Statistics	3/635			

The results of Table 15 to test the relationship between operational profitability index and inventory management suggests that since Prob calculated for this variable is equal to 00000/, so, there is significant correlation between these two variables at 95%. On the other hand, for the accuracy in the coefficient estimated to be equal 3.345, it suggests a positive correlation between these two variables. Thus, the significant relationship between operational profitability and inventory management is supported.

There is a significant relationship between the standard deviation in liquidity and inventory management in companies listed on the stock exchange.

H0 = there is no significant relationship between the standard deviation of liquidity and inventory management,

H1 = there is a significant relationship between the standard deviation of liquidity and inventory management.

**Table 16:** Results of regression analysis using fixed effects of SD variables

Variable	Determination coefficient	SD	Calculated T	Significance level
Operational profitability index	3/0462	0/0783	4/7105	0/0927
C	-2/75205	3/7863	0/05109	0/5053
Coefficient R	0/4205	Significance level (F-statistic)		0/000
Square R	0/1962	Watson-Durbin Test		2/1205
Statistics F	2/7038			

The results of Table 16 to test the relationship between operational SD in liquidity and inventory management suggests that since Prob calculated for this variable is equal to 3.046, so, there is significant correlation between these two variables at 95%. On the other hand, for the accuracy in the coefficient estimated to be equal 3.046, it suggests a positive correlation between these two variables. Thus, there is no significant relationship between the two variables. Thus, a significant correlation between the standard deviation of liquidity and inventory management has been rejected.

### 5. Discussion and Suggestions

Based on the results and findings of the study, two categories of suggestion are presented. First, practical suggestions hoping that it would be a reference guide for administrators and professional accounting standards and also help users of accounting and financial information, especially investors and creditors in decision making. And second, suggestions for future research that can guide future research on the topic of study.

According to the research results, the management company especially the companies listed in the stock exchange is recommended that in order the decisions of investors and creditors to be influenced, they provide relevant information, for investors and creditors make decisions based on related information to investment or lending loans.

Based on results, company management is recommended to provide relevant information, because the ownership structure and inventories management of the company and as a result of the company's profitability, managers can benefit from receiving bonuses.

It is recommended that Tehran Stock Exchange consider the findings of this research in drafting regulations on the size of the board and their control in exchange companies. Also, an adjustment in economic and financial systems and capital markets in order to achieve an efficient market is conducted to perform studies that cause improvement in the fields of accounting and finance and economy of the country.

## 6. Conclusion and Future Works

As was observed, the present study describes the exchange firms' data and the assessment analysis of research models. After describing the data, panel data was specially examined and that the start of the test was with Limer's test which its results indicate data panel. Hence, Hausman test was used to select an appropriate method for assessing research models and the results of this test introduced fixed effects methods as the best method for assessing research models. Then, a static classical test (reliability) of the data and data heteroscedasticity test was also done that is resulted in static and lack of data heteroscedasticity. After these tests, hypotheses test was considered that according to the results achieved from software output, all research hypotheses apart from the first one are confirmed and a significant relationship was found.

Research on the impact of ownership structure, especially institutional ownership and financial information for admission in the Stock Exchange be done. Research on the impact of the disclosure on inventory management be done. It is recommended that the current study regarding different industries according to the specific industry be done. Research on the impact of ownership structure on the anticipated impact of the continuing activities of the companies listed in Tehran Stock Exchange be done.

In the end, it is recommended that further research in this area be done. As more research and finding meaningful relationships between accounting information and the needs of investors and creditors, etc. can create different models of prediction power of accounting information. The more the prediction power of accounting knowledge, the more it can be scientific.

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