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The Survey of the Financial and Corporate Governance Structures Effect on the Companies "Board of Managers' Independence

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ABSTRACT
The objective of the current study is the survey of the financial structure and the corporate governance structure of the company effect on the board of managers' independence. The present study is a causative-analytical research which is performed based on a library method and it makes use of the panel data analysis. In the present study, we have dealt with the survey of the financial information obtained from 102 companies accepted in Tehran's securities exchange market during a time span from 2009 to 2014 (612 company-year). To analyze the results obtained from the study there is made use of Minitab 20, Eviews 16 and SPSS 7 software. The results of the study in relation to the first hypotheses confirmation indicate that there is a significant and direct relationship between the growth and development opportunities and the companies' board of managers' independence. Also, according to the analyses performed in respect to the verification of the second hypothesis proposed in the current study we came to the conclusion that there is a significant and inverse relationship between the expected return rate and the companies' board of managers' independence. In the next step and in connection to the verification of the third hypothesis posed in the present research paper it was shown that there is a significant and direct relationship between the expected return rate and the companies' board of managers' independence. Also, according to the analyses conducted in respect to the verification of the fourth hypothesis claimed by the present study it was demonstrated that there is a significant and inverse relationship between the head of the board's fixed effects and the companies' board of managers' independence. Then, the results of the analyses carried out in the current research paper regarding the verification of the fifth study hypothesis indicated that there is a significant and direct relationship between the stock market value and the companies' board of managers' independence. And, finally, regarding the verification of the results obtained through the sixth hypothesis test we came to the conclusion that there is a significant and direct relationship between the revenues fluctuations and the companies' board of managers' independence.
Keywords: growth opportunities, board of managers, expected return rate, chairman of the board's fixed effects, stock market value, earnings fluctuations and panel data

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INTRODUCTION

The investors are most often to make decisions regarding their investment adventures and they are seeking to obtain the maximum possible return. Thus, the shareholders usually focus on any sort of information by means of which they are enabled to forecast the company's growth [1]. The growth opportunity is a propelling force and an incentive which motivates the stakeholders and therefore it is also considered as a reward to them [2]. In the meantime, the investors have to take risks into consideration in their decision making activities since the optimum use of the extant investment chances can bring about the conditions for success and to achieve such a goal there is a need for the effective financial policies influencing the growth opportunities to be identified in the business entities. Enhancing the professional knowledge and awareness of the novel accomplishments and gains in the investment area along with the concomitant communication technology development has made the capital suppliers invest their sums of money in the companies which provide them with a greater likelihood of making profit; therefore, the (capital) fund flow has been become agile more than ever before in various forms and investment adventures have been intensified during the recent years and accounting has also been found to have discovered its greatest variations during the same years. Neglecting such variations is considered as an example of falling behind and laggard and it is also regarded as a failure in the today's

competition battlefield and it has also been found to be extremely misleading and weakening [3]. What is the cause of success seems to be the optimum exploitation of the existing investment chances for the purpose of which the factors effective on the companies' growth opportunities should be identified. One of the most important subjects of interest to the for-profit organizations is the cash volume and risk of the for-profit organizations which plays a considerable role in the profit organization's growth and survival. Investment return risk variations stemming from the growth opportunities and macro-economical variables fluctuations can influence the investment options. The investors take investment measures hoping to acquire more wealth. Among the important factors which are taken into consideration by the investors is the stock return rate. Therefore, the growth opportunities can influence the substantial variables of the export and import sectors and investment input and output [4]. The investors are looking for ways to estimate the profits and returns and the cash flows originating from the novel technologies applied by the institution in which they have staked their money in order to become able to judge and make decisions about their future cash profit rate and their own stock value according to and in contrast with the opportunities available through the other similar investments [5]. They are in need of the information pertaining to the future earnings in order to be able to estimate their future cash profit acquisition that is because the profits are the most critical information source regarding the company's future profit payment ability. The reason why the future cash profits are so much focused on is that it is tried to relate the securities prices to the investment future profits. Forecasting the future earnings fluctuations is of a great importance in the application of a great many of the stock evaluation models. In this regard, Elson believes that it is only the forecasted profit distribution which can be used in the general credible niche for investing in the securities market; he also believes that the securities value is a function of the expected cash profit which is measured based on the adjusted risk. The net income growth rate exerts a positive influence on the companies' expected stock return, so paying attention to the income undulations factor along with the company's growth rate is deemed as an essential step taken to achieve higher performance levels.

Study theoretical principles:

The current study intends to provide the capital market actors including the potential and active investors and the others with applied principles through recognizing and investigating the effect that the corporate governance structure and financial structure exert on the companies' board of managers' independence. It is evident that it is expected from any research and study undertaken to present the results which are of interest to its audience in order to be effective and efficient in making decisions, thus the present study does not find itself an outlier to the just-mentioned principle. On the other hand, the results obtained in various studies are also of significance and importance to the companies' managers as well because they are urged to make and obtain more positive results, accordingly. In the present study, the study main variables concepts have been proposed as stated below:

Growth opportunities: They are defined as the groundings and ways paved in relation to making new investments according to the companies' predictable constraints and their cash funds [6].

Corporate governance structure:

In 2004, the international accountants' federation defined corporate governance structure as "the responsibilities and the methods applied by the board of managers and the dutiful managers with the objective of identifying a strategic path which guarantees goal achievement, risks control and accountable consumption of the resources.

Expected return: it is an output or gain that the investors expect to reach in order to feel that they have been adequately and sufficiently rewarded [7].

Chairman of the board's fixed effects:

Chairman of the board's fixed effects is a dummy or artificial variable and if the chairman of the board and the general manager of the company are the same, it is given a value of 1 and otherwise it is equal to zero .

Stock market value:

The rate and the value of a unit of stock share portfolio extant in every stock exchange market are called the stock market value [4].

Earnings undulations:

It is considered as the increase made in the shareholders' equity except the cases in which it is related to the shareholders' throughput [8]. This ratio is equal to the company's net annual income and the data related to it are extracted of the companies' loss and profit statement. Income fluctuations include the discrepancy between the current year earnings and the income obtained the year before the current year divided by the income obtained the year before the current year.

Board of managers' independence:

The non-executive members of the board of managers are the ones who are not assigned with executive responsibilities in the company and they are the professional directors with expertise in the field of

decision controls. Their duty involves activities accompanied with the serious proxy and representative challenges between the executives and the shareholders including the executive managers' reward determination and inspecting and supervising for the purpose of senior managers' substitution. Moreover, the academic literature is suggestive of the idea that the non-executive members protect the shareholders' interests far better and they are better representatives for them. Based on this, the independent members control the proxy and representativeness problems and they reduce the informational asymmetry between the manager and the shareholders through offering better and higher quality disclosure [1].

Study hypotheses:

According to the theoretical foundation of the current study and the studies performed the study hypotheses can be presented as stated below:

Main hypothesis 1: there is a significant relationship between the growth opportunities and the companies' board of managers' independence.

Main hypothesis 2: there is a significant relationship between the corporate governance structure and the companies' board of managers' independence.

Main hypothesis 3: there is a significant relationship between the expected return rate and the companies' board of managers' independence.

Main hypothesis 4: there is a significant relationship between the chairman of the board's fixed effects and the companies' board of managers' independence.

Main hypothesis 5: there is a significant relationship between the stock market value and the companies' board of managers' independence.

Main hypothesis 6: there is a significant relationship between the earnings fluctuations and the companies' board of managers' independence.

Study methodology:

The present study is a correlation research and it is enumerated among the applied researches in terms of its objective. Also, the study plan is of the semi-experimental type since there is made use of the historical data therein. The study population includes all of the companies accepted in Tehran's securities exchange market in a period from 2009 up to 2014 and the study sample volume encompasses the companies who had been accepted to Tehran's securities exchange market up to the end of the year 2008, their fiscal year had to be terminated in March, they were supposed not to have changed their fiscal year during the course of the study and their data required for the study had to be available. Based on the exertion of the abovementioned constraints, the total number of 102 companies (company in the entire years) was selected as the study sample volume. The required information and data for carrying out the current research were acquired through Tehran's securities exchange market official site including the Islamic researches and development studies management site (Rdis), stock exchange market information firm and Rah-Avard-Nowin software and the preliminary calculations were undertaken in Excel spreadsheet. Then the final analyses were conducted by taking advantage of Minitab 20, SPSS 7and Eviews. The multiple regression patterns and the panel data statistical methods were also applied to test the study hypotheses.

The model proposed in the present study is excerpted from the research carried out by Marion [5] and the adjusted variables applied in the study conducted by Erna and Braga Alves (2015) have been estimated as follows:

Study hypotheses-related model:

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t}$$
$$+ \beta_6 \mathrm{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t}$$

In the above pattern, the board of managers' independence is indicative of the dependent variable and it is calculated as below:

$Ind_{i,t}$): The non-executive members to the total number of the board of managers ratio..

Growth opportunities, corporate governance structure, expected return rate, the chairman of the board's fixed effects, stock market value and income undulations are the independent variables of the study and they are made use of appropriately and accordingly to test each of the hypothesis. The method of calculating such variables has been presented underneath:

Growth Opportunities ($MTB_{i,t}$):

Growth opportunities equal the equity market to book value ratio [6].

$$MTB_{i,t} = \frac{\text{equity market value}}{\text{equity book value}}$$

Corporate governance structure (Modiefied G-index$_{i,t}$):

In the present study the three variables of board of managers, equity structures and the institutional investors have been made use of in the study hypotheses as the corporate governance scales which are defined as stated below:

Board of managers' structure:

Board of managers' structure embraces the non-executive directors' percent to the total number of the board of managers. Non-executive members are the directors who are not assigned with an executive position.

Ownership structure:

Ownership structure includes the major shareholders equity shares from the total shares of the entire companies accepted in Tehran's securities exchange market [17]. In the current study, a major shareholder is an equity holder who possesses 20% to 50% of a company's shares.

Institutional investors:

It is the percent of the company's share held by major investment institutions to the total shares released and available for or taken by the shareholders. The investment firms, common investment funds, insurance companies, retirement funds, investment banks and the private companies are usually classified as the institutional investment firms [3].

Expected return (STDEVS$_{i,t}$):

In the current study, the expected return rate has been calculated based on the total index of the companies' stock shares existing in Tehran's securities market. Based on this, the expected return rate of the market investment is calculated according to the following equation:

$$STDEVS_{i,t} = \frac{TEPIX_t - TEPIX_{t-1}}{TEPIX_{t-1}} \times 100$$

where,

$TEPIX_t$ =the stock exchange market index (price and the cash return) at the end of the year t,

$TEPIX_{t-1}$= the stock exchange market index (price and the cash return) at the end of the year t-1

The chairman of the board's fixed effects (CEO & Chair$_{i,t}$):

It is a dummy and artificial variable and if the CEO and the chairman of the board are both the same person it is given a value of 1 and otherwise it is 0.

Stock market value (MVE$_{i,t}$):

Stock market value is the price with which the shares are transacted in the market place and it is determined through supply and demand in the market. When the stock shares are sold and purchased by the shareholders, the stock market value can be applied as an index for the net value of the company in general public's ideas and this is a factor which can bring about different sorts of valuations for the various types of the shares. Stock market value indicates the total value of the company or the shares. Stock market value is equal to the market value of the entire transactable shares and this has to be taken as being equal to the stock value multiplied by the number of the stock shares which is calculated based on the following formula [4]:

Number of the stock shares × stock value= stock market value

$MVE_{i,t}$= MS × NS

Earnings fluctuations (ADJEBIT$_{i,t}$):

Income ratio is equal to the company's net income divided by the book value of the total sum of the assets the data related to which is extracted from the loss and profit statement of the company and its method of calculating has been given below [18]:

$NEIn_{i,t}$=

And, finally the earnings undulations can be computed via the formula presented below:

$ADJEBIT_{i,t}$= $\frac{\text{Current year income} - \text{the income from}}{\text{the income from the year be}}$

The control variables used by the present study are as below:

Leverage ratio (LTD$_{i,t}$):

A high financial leverage is more likely an indicator of the increase in the debt to cash sums ratio accumulated by the company and the companies with a high financial leverage are more likely to become bankrupt. High financial leverage ratio is reflective of the idea that with the increase in the debts the cash sums level decreases. Based on this, the companies with more cash assets can cover these assets with cash sum levels and try to more decrease their debts [15]. Marion [5] came to the conclusion that there is a negative relationship existing between the financial leverage and the cash assets.

Stock price volatility ($NSEGS_{i,t}$):

Stock price volatility is equal to the stock price growth rate which is calculated based on the following formula according to the study conducted by Adams *et al* [16]:

$$NSEGS_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}$$

$NSEGS_{i,t}$= stock price volatility as compared with the year before the current year for the company i in the year t.

$P_{i,t}$= Company i's stock price in the year t.

P_{it-1}= Company i's stock price in the year before the current year

Company Age ($AGE_{i,t}$):

Company age is equal to the logarithm of the company age from the very year it has been established up to the study year [19].

Company Size ($Size_{i,t}$):

In the current study there is made use of the company size ($Size_{i,t}$) to reduce the savings in the cash reserve stemming from the scale [20]. Therefore, according to the capital market status and the effects exerted by the inflation on the companies in our country, we have made use of the total assets book value natural logarithm which is deemed as a better indicator of the company status. The higher the value of this index is calculated the company of the interest is found to be bigger in size.

$Size_{i,t}$=LN ($Size_{i,t}$)

Where,

$Size_{i,t}$= the company i's total assets book value at the end of the year t.

Free Cash Flows ($FCF_{i,t}$):

Free cash flows in the present study takes advantage of the model proposed by Siret *et al* (2002) to measure the business entities free cash flows. Based on the model, free cash flows are defined as the operating profit before depreciation minus the total taxes plus the interest expenditures and the dividend share allocated and it is standardized through dividing over the total assets (Luis *et al*, 2001), and the way the free cash flows should be measured is presented below:

$FCF_{i,t}$ =($INC_{i,t}$-$Tax_{i,t}$-$INTEXP_{i,t}$-$CSDIV_{i,t}$)/$ASSET_{i,t}$

where,

$FCF_{i,t}$ =free cash flows

$INC_{i,t}$ =operating profit before deducing the deprecation cost

$Tax_{i,t}$ =Tax

$INTEXP_{i,t}$=Interest expenditures

$CSDIV_{i,t}$=the dividend share paid to the customary shareholders

$Asset_{i,t}$=the total sum of the assets book value

Ɛ= company i's random error at the end of the year t

The study hypotheses test results:

The study first hypothesis test result:

The objective of testing the first study hypothesis has been the survey of the relationship between the growth opportunities and the companies' board of managers' independence and its statistical hypothesis can be defined as below:

H_0: there is no significant relationship between the growth opportunities and the companies' board of managers' independence.

H_1: there is a statistically significant relationship between the growth opportunities and the companies' board of managers' independence.

The proposed hypothesis is estimated via the use of model (1) in the form of panel data and in case that β1is found to be statistically significant in a 95% confidence level the hypothesis can be confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \text{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_1 = 0 \\ H_1 : \beta_1 \neq 0 \end{cases}$$

In order to be able to determine that whether the use of the panel data method has been efficient and effective in estimating the model there is made use of Chow Test or the bound test and in order to make it clear that which method (fixed effects and/or random effects) are thought to be more appropriate for model estimation purposes (the determination of the cross-sectional units differences being fixed or random) we have taken advantage of Hossman's test. The results obtained via conducting the above tests have been presented in table (1).

Table 1: the results of the Chow and Hossman tests from the model (1) estimation

Test	Number	Statistics	Statistic-value	Degree of freedom	p-value
Chow	612	F	5.0190	(101499)	0.0000
Hossman	612	X2	20.5463	11	0.0384

According to the results of Chow test and its P-value (0.0000), H0 hypothesis of the test is rejected in 95% confidence level which is reflective of the idea that the panel data can be made use of here. Also, according to the results obtained from Hossman test and its p-value (0.0384) which is indicative of a value lower than 0.05, H0 hypothesis is rejected in 95% confidence level and H1 hypothesis is confirmed. Thus, it seems necessary to estimate the model through taking advantage of the fixed effects method.

To assess the model validity and survey the classic regression assumptions it is necessary to besides investigating about the absence of a collinearity relationship between the independent variables inputted to the model, there is also necessary to conduct tests in connection with the residues normality, variances similarities, residues independence and the absence of the model specification errors (model's linearity). To test the error terms normality one can take advantage of various tests. One such test is Jarque-Bera test and we have also made use of the same test in the current study. The results obtained from Jarque-Bera test signify the idea that the residuals remaining from the study model estimation enjoy an normal distribution in the 95% confidence level, in such a manner that the test likelihood (0.8541) has been figured out to be larger than 0.05. One of the other classic regression statistical presuppositions is the residues variance similarity. In case that the variances are found to be dissimilar then it indicates that the linear estimator is unbiased and so it would not show the lowest variance. In the present study, we have made use of Breusch-Pagan test to study the variances similarity. According to the significance level of the test which has been found to be lower than 0.05 (0.0198), the null hypothesis indicating the presence of the variances similarity is rejected and thus it can be stated that the model has the problem of variances dissimilarity. In the present study we took advantage of the generalized least squares (GLS) estimation method to resolve the abovementioned problem. Also, in the present study we have made use of Durbin-Watson (D-W) test to study the residues none correlation which is considered as one of the presuppositions of the current study and it is called autocorrelation. According to the preliminary results obtained from the model estimation analysis the Durbin-Watson value was found to be equal to 2.27 and since it is in a range from 1.5 to 2.5 then it can be concluded that the residues are independent from one another. Moreover, we have made use of Ramsey test to test the idea that the model enjoys a linear relationship and that the model of interest for the current research paper has been correctly elucidated in terms of its being linear or nonlinear. According to the fact that Ramsey test significance level (0.2617) is larger than 0.05, therefore the null hypothesis of the test indicating the model being linear is confirmed and the model does not show any specification error. The summary of the above tests results have been provided in the table (2).

Table 2: The test results related to the model (1) statistical assumptions

Jarque-Bera statistics		Breusch-Pagan statistic		Durbin-Watson statistics	Ramsey statistics	
X2	p-value	F	P-value	D	F	P-value
1.9375	0.8541	1.7200	0.0198	2.27	1.3437	0.2617

According to the results obtained from the Chow test and Hossman test and also based on the classic regression statistical assumptions test results, the study model (1) is estimated based on the panel data and in the form of fixed effects. The results of the model estimation have been shown in the table (4-7). The estimated form of the model through taking advantage of Eviews 7 software is presented below:

$$Ind_{i,t} = -0.0191 + 0.1775MTB_{i,t} - 0.0353ModifiedG-index_{i,t} + 0.0260STDEVS_{i,t} - 0.0050CEO\&Chair_{i,t} + 0.0660MVE_{i,t} + 0.0432\text{ADJEBIT}_{i,t} + 0.0066LTD_{i,t} + 0.1566NSEGS_{i,t} + 0.0214AGE_{i,t} + 0.0079Size_{i,t} - 0.0340FCF_{i,t} + \varepsilon_{i,t}$$

Table 3: the first hypothesis test results by making use of fixed effects method

Dependent variable: board of managers' independence Number of observations: 612 year-company				
Variable	Coefficient	t-value	P-value	Relationship
Fixed component	-0.0191	-1.2883	0.0032	Negative
Growth opportunities	0.1775	1.7667	0.0009	Positive
Corporate governance structure	-0.0353	-2.4745	0.0353	Negative
Expected return rate	0.0260	1.0450	0.0065	Positive
Chairman of the board's fixed effects	-0.0050	-1.5505	0.0022	Negative
Stock market value	0.066	4.1820	0.0000	Positive
Income fluctuations	0.0432	1.9718	0.0492	Positive
Financial leverage ratio	0.0066	0.3436	0.7313	Insignificant
Stock price volatility	0.1566	3.7955	0.0002	Positive
Company age	0.0214	1.0769	0.2820	Insignificant
Company size	0.0079	1.0026	0.3165	Insignificant
Free cash flows	-0.0340	-0.3894	0.6971	insignificant
Model estimation coefficient				0.5419
F-value				5.2703
P-value				(0.0000)

In the survey of the overall model significance according to the F-value being smaller than 0.05 (0.0000), with a 95% confidence level the whole model is confirmed. The model determination coefficient is also expressive of the idea that 54.19% of the companies' board of managers' independence can be accounted for by the variables inputted to the model.

In investigating the coefficients significance according to the results presented in table (3), since the t-statistic likelihood for the growth opportunity coefficient has been found to be smaller than 0.05 (0.0009), consequently, the existence of a significant relationship between the growth opportunity and the board of managers' independence is confirmed in a 95% confidence level. Therefore, the study first hypothesis is accepted and it can be said with a 95% confidence level that there is a significant relationship between the growth opportunity and the companies' board of managers' independence. The variable coefficient positivity (0.1775) signifies the presence of a direct relationship between the growth opportunity and the companies' board of managers' independence, in such a manner that with a 1 unit increase in the growth opportunity the companies' board of managers' independence also increases about 0.1775 units.

The results of the study second main hypothesis:

The objective of the second study hypothesis test is to survey the idea that whether a significant relationship is present between the corporate governance structure and the board of managers' independence. And the relevant statistical assumptions can be presented as below:

H0: there is not a significant relationship between the corporate governance structure and the board of managers' independence.

H1: there is a statistically significant relationship between the corporate governance structure and the board of managers' independence.

This hypothesis is estimated through the use of model (1) in the form of panel data and in case that β2 coefficient is found statistically significant in a 95% confidence level then the hypothesis is confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \text{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_2 = 0 \\ H_1 : \beta_2 \neq 0 \end{cases}$$

In the survey of coefficients being statistically significant according to the results presented in table (4-7), since the t-statistic likelihood for the corporate governance structure variable coefficient is smaller than 0.05 (0.0353), therefore the existence of a significant relationship between the expected return rate and the board of managers' independence is confirmed in a 95% confidence level. Thus, the second hypothesis proposed in the current study is confirmed and with a 95% confidence it can be asserted that there is a statistically significant relationship between the expected return rate and the board of managers' independence. The negativity of the variable coefficient (-0.0353) is reflective of an inverse relationship between the expected return rate and the board of managers' independence, in such a manner that with a one unit increase in the expected return, the board of managers' independence is also decreased 0.0353 units.

The results of the third main hypothesis:

In the third hypothesis the relationship between the expected return and the board of managers' independence is evaluated and the statistical assumption is accordingly expressible in the following form:

H0: there is no statistically significant relationship between the expected return rate and the companies' board of managers' independence.

H1: there is a statistically significant relationship between the expected return rate and the companies' board of managers' independence.

This hypothesis is estimated by making use of model (1) in the form of the panel data and in case that β3 coefficient is found to be statistically significant in a 95% confidence level then the study hypothesis can be confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \mathrm{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_3 = 0 \\ H_1 : \beta_3 \neq 0 \end{cases}$$

For the t-coefficient in the survey of the coefficients significance level according to the results presented in the table (3), since the expected return rate likelihood is found smaller than 0.05 (0.0065), therefore the existence of the significant relationship between the expected return and the board of managers' independence is confirmed in a 95% confidence level. Therefore, the third hypothesis of the study is accepted and with a 95% confidence level it can be asserted that there is a statistically significant relationship between the expected return and the board of managers' independence. The positivity of the coefficient (0.0260) is suggestive of the existence of a direct relationship between the expected return and the board of managers' independence in such a way that with a one-unit increase in the expected return, then the board of mangers' independence is also increased 0.0260 units.

The results of the main fourth hypothesis:

The objective of the fourth hypothesis presented in the current research paper is the evaluation of the relationship between the expected return rate and the board of managers' independence and the statistical assumption pertaining thereto can be expressed as below:

H0: there is no statistically significant relationship between the expected return rate and the board of managers' independence.

H1: there is a statistically significant relationship between the expected return rate and the board of managers' independence.

The hypothesis is estimated via the use of model (1) in the form of panel data and in case that β3 coefficient is fount significant in is a 95% confidence level then the hypothesis is confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \mathrm{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_4 = 0 \\ H_1 : \beta_4 \neq 0 \end{cases}$$

In the survey of the coefficients significance according to the results provided in table (4-7) since the t-statistic likelihood for the chairman of the board fixed effects is obtained smaller than 0.05 (0.0022),

therefore the presence of a significant relationship between the chairman of the board fixed effects and the board of mangers' independence can be confirmed in a 95% confidence level. Therefore the fourth hypothesis is confirmed accordingly and thus it can be stated with a 95% confidence level that there is a statistically significant relationship between the chairman of the board's fixed effects and the board of managers' independence. The negativity of the variable coefficient (-0.0050) is reflective of the existence of a direct relationship between the chairman of the board fixed effects and the board of managers' independence in such a manner that with a unit increase in the expected return the board of managers' independence is also decreased by 0.0050 unit(s).

The results of the study fifth main hypothesis:

In the fifth hypothesis proposed by the current study the relationship between the stock market value and the board of managers' independence has been surveyed and the statistically assumption related thereto can be expressed in the following form:

H0: there is no statistically significant relationship between the stock market value and the board of managers' independence.

H1: there is a statistically significant relationship between the stock market value and the board of managers' independence.

The hypothesis is estimated via taking advantage of the model (1) in the form of panel data and in case that β5 coefficient is found to be statistically significant in a 95% level then the hypothesis can be confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \mathrm{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_5 = 0 \\ H_1 : \beta_5 \neq 0 \end{cases}$$

In the survey of the coefficients being statistically significant according to the results presented in the table (4-7), since the t-statistic likelihood for the stock market value coefficient is found to be smaller than 0.05 (0.0000), then the presence of a significant relationship between the stock market value and the board of managers' independence can be confirmed in a 95% confidence level. Therefore, the fifth study hypothesis is accepted and it can be expressed with a 95% confidence level that there is a statistically significant relationship between the stock market value and the board of managers' independence. The positive coefficient (0.0660) here is indicative of the existence of a direct relationship between the stock market value and the board of managers' independence in such a manner tha6 with a 1 unit increase in the stock market value then the board of managers' independence is also increased by 0.0660

The results of the study sixth main hypothesis:

The objective of the sixth hypothesis presented in the current study is the investigation of the relationship between the asymmetrical cash flows resulting from income volatility with the board of managers' independence and the statistical assumption relevant thereto can be asserted as beneath:

H0: there is no statistically significant relationship between the income volatilities and the board of managers' independence.

H1: there is a statistically significant relationship between the income volatilities and the board of managers' independence.

The hypothesis is estimated by making use of model (1) in the form of panel data and in case that β6 coefficient is found to be statistically significant in a 95% confidence level then the study hypothesis is confirmed.

$$Ind_{i,t} = \alpha_0 + \beta_1 MTB_{i,t} + \beta_2 ModifiedG\text{-}index_{i,t} + \beta_3 STDEVS_{i,t} + \beta_4 CEO\&Chair_{i,t} + \beta_5 MVE_{i,t} + \beta_6 \mathrm{ADJEBIT}_{i,t} + \beta_7 LTD_{i,t} + \beta_8 NSEGS_{i,t} + \beta_9 AGE_{i,t} + \beta_{10} Size_{i,t} + \beta_{11} FCF_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\begin{cases} H_0 : \beta_6 = 0 \\ H_1 : \beta_6 \neq 0 \end{cases}$$

In the survey of the coefficients being significant according to the results presented in table (4-7), since the t-statistic likelihood for the income volatilities coefficient is found to be smaller than 0.05 (0.0492), then the presence of a statistically significant relationship between the income volatilities and the board of managers' independence can be confirmed with a 95% confidence level. Thus, the study sixth hypothesis is accepted and with a 95% confidence it can be stated that there is a statistically significant relationship between the income volatilities and the board of managers' independence in such a way that

with a unit increase in the income volatility the board of managers' independence is also increased by 0.0432 unit (s).

DISCUSSION AND CONCLUSION

In the present study six main hypotheses were evaluated. In the first main hypothesis, the relationship between the growth opportunities and the companies' board of managers' independence was investigated. The results obtained from the hypothesis test indicated that there is a positive and significant relationship between the growth opportunities and the companies' board of managers' independence. The results of the first hypothesis correspond with the results obtained in some of the previous studies including [2, 4] and they are found to be discordant with the results obtained in the studies conducted by Sanders and Mayers [9]. In the main second hypothesis, the relationship between the corporate governance structure and the companies' board of managers' independence was investigated. The test results obtained for this second hypothesis are indicative of the existence of an inverse and significant relationship between the expected return and the companies' board of managers' independence. The results obtained for the second hypothesis conforms to the findings obtained in a great majority of the other researches including [10, 11]. Also, in the third main hypothesis, the relationship between the expected return rate and the board of managers' independence was also investigated. The results of this hypothesis test are indicative of the existence of a direct and significant relationship between the expected return rate and the companies' board of managers' independence. The results of the hypothesis test correspond with the findings obtained in many of the other studies performed by [1, 6]. In the next step, the fourth main hypothesis investigated the relationship between the chairman of the board's fixed effects and the board of managers' independence. The results of the hypothesis test are reflective of the presence of an inverse and significant relationship between the chairman of the board's fixed effects and the board of managers' independence. The results obtained from the hypothesis conform to the findings gained in many of the other studies including, Graham et al [12]. Also, the fifth main hypothesis proposed by the current research paper deals with the survey of the relationship between stock market value and the companies' board of managers' independence. The results obtained from this study indicated that there is a direct and significant relationship between the stock market value and the companies' board of managers' independence. The results of the study fifth hypothesis are consistent with the results obtained in some of the previous researches conducted by Kaplan *et al* [13] and Griffin *et al* [4] and they have been found to be discordant with the results obtained by Felton [14]. In the end, in the sixth main hypothesis the relationship between the income or earnings volatility and the companies' board of managers' independence was evaluated. The results of the hypothesis test are suggestive of the existence of a direct and significant relationship between the income volatility and the companies' board of managers' independence. The results obtained from this hypothesis test are corresponding with the findings acquired from great deal of the other researches carried out by Kang *et al* [2].

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