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Research Article

INVESTIGATION OF THE RELATIONSHIP BETWEEN THE PERIOD OF PRESIDENCY OF THE MANAGEMENT BOARD OF THE COMPANY AND RISK OF FUTURE DISHONOR AND SALES GROWTH IN CEMENT INDUSTRY

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ABSTRACT
Investors always need information so that they can utilize them in their strategic decisions. Stockholders mainly invest in enterprises and therefore, factors which can reflect the continual profitability and growth of the company, can be an appropriate criterion for valuating them. One of these criteria is reduction of the risks corresponding to investment and factors affecting it. In this work, with the aim of studying the relationship between the period of the presidency of the company management board and risk of future dishonor and sales growth in cement industry, the nature of the effect of these parameters will be assessed. To carry out the research, a sample consisting nine cement companies accepted in Tehran stock market was selected. Data corresponding to the period of 2006-2012 were collected and statistically tested. To test research hypotheses, regression analysis and correlation were utilized and meaningfulness of the patterns was also measured by means of F-test, T-test, determination coefficient and Durbin – Watson test. Results obtained from statistical tests reveals that there is an inverse relationship between the period of presidency of company management board and the risk of future dishonor and a direct relationship between the period of presidency and company sales growth.

Keywords: *Period of Presidency of Company Management Board, Risk of Future Dishonor, Company Sales Growth, Cement Industry*

INTRODUCTION
Today, management plays a deterministic role in improvement of the efficiency and productivity of the companies. Among four key factors leading to success of the companies, including work force, investment, material and management, nowadays, the contribution of the management has become more significant than ever. In today competitive environment, there is considerable pressure for rapid access to suitable outcomes and consequently rapid decision making in which managers play a vital role and sometimes, as a result of failure in achieving suitable outcomes in shortest possible time, organization will experience managerial revolutions.
Period of presidency has reduced from 5 to 4 years (Lee, 2006) and consequently, pressure on managers for accelerating achievement to results has increased considerably. In addition, intention to make long term investments having no profitability in short term has declined, since managers consider these profits useful for future managers. On the other hand, lack of environmental uncertainty and intensity of competition among organizations, posed serious challenges to their managers. One of these challenges refers to risks arisen during various periods of presidency.
To effectively manage such challenge, novel management strategies and certain qualifications are provided and recommended. Each organization, according to nature of its work, experiences various risks and in today's rapidly changing conditions, success of the enterprise essentially depends on its control over risks and the type of management which applies for any risk type (Ghalami, 2011).
In this work, we study the relationship between the period of presidency of the company management, risk of future dishonor and company sales growth in cement industry. Since the period of presidency of the company management board is used as the most important index in controlling company operation, moreover, company management stability is considered as a part of the above issue, investigation of its

effect on the risk of future dishonor and company sales growth in cement industry has been selected as the subject of the study.

Literature Review

In this section, we review the studies in the fields related to our research. Wei Ting in 2013, investigated the relationship between the period of presidency of company management board and the risk of future dishonor and sales growth in Chinese stock market. Results reflected an inverse relationship between the period of presidency and the risk of future dishonor; furthermore, it revealed a direct relationship between the period and the company sales growth.

McClelland *et al.*, (2012) studied the horizons of the period of presidency on the performance of the companies. They believed that a top manager with short term professional horizon (measured using their age) employs a risk aversive strategy which in average, negatively affects the future performance of the company. Moreover, they believed that the high level of ownership of the manager due to its accompanying power intensifies this relationship. Extending the period of presidency using such paradigm damages the future performance of the company especially if the company is of dynamic nature. However, such paradigm may not pose a negative effect on the performance. Using a sample consisting 11 companies located in US, they defended their assumptions.

Dong and Yudan (2012), in a research entitled "investigation of the relationship between the period of presidency and the risk in US stock market and S&P500 index", used a sample consisting 500 companies during 1992-2006. By means of systematic analysis of risk, for the first time, they studied the effect of presidency of the top manager on his/her risk seeking. Their results demonstrated the direct relationship between the period of presidency and the management risk seeking. Their results confirms that longer period of presidency leads to lower professional concerns and encourages top manager to take more risks. In their research, they took various variables such as management presidency, period of presidency, cash used by management, management of company size, efficiency of assets and company lifetime into account.

James (2011) studied the relationship between the period of presidency of the management board and shares risk and wealth produced for investors and considered company strategic mechanisms as controlling variable. Results revealed the direct relationship between the period of management board presidency and profit management and inverse relationship between period of presidency, shares risks and wealth produced for investors.

Brookman (2009) evaluated the relationship between the period of presidency and risk of dishonor and company value and found out that there is an inverse relationship between the period of presidency and risk of dishonor and a direct relationship between the company value and presidency period.

Bergstresser and Philippon (2006), in a research entitled "investigation of the relationship between the period of presidency of the management board and profit management", studied the relationship between the period of presidency of the management board and profit management. Results showed that there is a direct relationship between the period of presidency and profit management.

Furthermore, studies on the risk of dishonor in various fields such as economy, finance and so on has been done. As an example of the studies done in economy, Kevin (2010) showed that the risk of dishonor depends on the major economic conditions. Arellano (2007) investigated the relationship between dishonor and GDP deviation, or Toms and Wright studied the history of the dishonor in industries of developed countries during 1820-2004 and found out that dishonor is related to industries outcome. Moreover, they discovered that in addition to serious depression or level of outcome of the industries, many other reasons can demonstrate dishonor.

In Iran, Heydari (2013), in a research entitled "investigation of the relationship between cash deposit, the investment expenditure and future years sales growth" states that cash is one the significant and vital resources of the profit unit and making a balance between accessible cash and required cash is the most important factor in economic health of the profit unit. Since both companies which store enough cash and one which stores a high level of cash have major problems, in this work, the relationship of cash deposit and expenditure of cash opportunity with investment expenditure and future years sales growth in Tehran

stock market was studied. Present paper, covers the years 2006-2011 of Tehran stock market in which, totally 515 observations for research period was utilized. Statistical method used for research is multivariate regression. Results illustrate that there is a direct relationship between cash deposit and investment expenditure and growth of future year's sales. Moreover, results show that there is an inverse relationship between cash opportunity expenditure and investment expenditure.

In addition, Davoudi (2012) assessed the relationship between the period of presidency of the company and profit management, dishonor risk and company growth opportunity. To carry out the research, a sample composed of 116 companies accepted in Tehran stock market was provided by means of systematic sampling method. Data corresponding to the period of 2005-2011 was collected and statistically tested. To carry out the research, three hypotheses were stated and confirmed. Results of statistical tests reveal that there is a meaningful and inverse relationship between the period of company presidency and dishonor risk and profit management. Moreover, there is a direct relationship between the period of presidency and company growth opportunity.

Based on issues said above, research goals and carried out researches, two hypotheses can be stated for this work:

First hypothesis: there is a meaningful relationship between the period of presidency of company management board and the risk of dishonor in cement industry.

Second hypothesis: there is a meaningful relationship between the period of presidency of company management board and the company sales growth.

MATERIALS AND METHODS

Resent work is one of the applied researches. The method of research is correlative from identity and content point of view. In such researches, the relationship between variables is analyzed based on the goal. Research is carried out in comparative – deductive framework. In this way, theoretical basis and research history has been based on comparison and data collection for confirm or reject the hypotheses has been based on deduction. Statistical community of the research includes all cement industry companies which meet the following criteria:

1. Being accepted in Tehran stock market before 2006.
2. Their fiscal year during the time period of the research, end to March.
3. Disclose the required information for measuring the research variables.

To perform this research, using experts' opinion, a sample consisting of 9 companies in cement industry companies accepted in Tehran stock market and are shown in table 1 were selected. Data corresponding to years 2006-2012 were collected and statistically tested.

Table 1: List of companies of statistical community

Number	Company	Number	Company
1	Shargh Cement	6	Mazandaran Cement
2	Sepahan Cement	7	Kerman Cement
3	Tehran Cement	8	Ghayin Cement
4	Urmia Cement	9	Sofiyan Cement
5	Shomal Cement		

Variables

Research variables are described according to the goal and the hypotheses of the research in the following conceptual format:

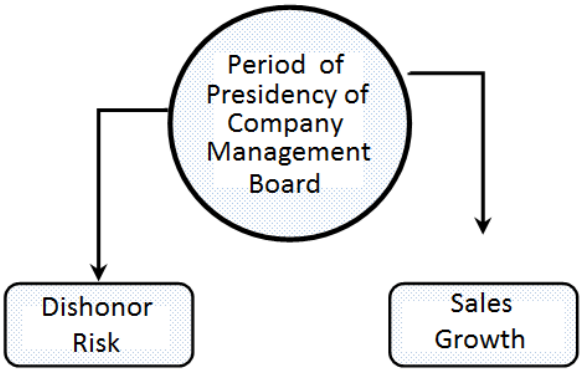

Figure 1: Model of Research Basic Variables

Therefore, the variable of the period of presidency can be considered as independent of the two hypotheses and variables of risk of dishonor and sales growth are dependent variables of the first and second hypotheses, respectively.

Data Analysis

The process of data analysis is a multi-step one during which data provided by means of tools of collection in statistical community, re summarized, codified and finally processed so that any analysis and relating the data becomes possible to test the hypotheses. In this section, we describe research data and analysis of hypotheses.

Indices Describing Research Variables

To better understand the identity of the community taken into consideration and also research variables before statistical data analysis, data must be described. Moreover, statistical description of the data is a step toward understanding the pattern governing them and a basis for illustration of the relationship between variables used in research. Hence, before proceeding to hypothesis test, research variables are briefly described in table 2.

Table 2: Statistical description of the research variables

Sign	DEBT	ROA	LNASSET	DIRECTit	Sign	CEOCHANGE	Opration Managementit	Risk	G SALE
Number	63	63	63	63	Number	63	63	63	63
Mean	0.656293	0.129502	13.216684	5.26	Mean	3.29	2.03	0.947916	236372.54
median	0.666777	0.101817	13.04988	5	median	3	1	0.98117	33596.5
Mode	0.4132	0.2047	15.1292	5	Mode	3	1	0.9425	0
Standard deviation	0.1714297	0.1256718	1.39599	0.677	Standard deviation	1.758	1.679	0.1737571	2111859.37
Variance	0.029	0.016	1.949	0.458	Variance	3.092	2.818	0.03	4.46E+12
skewness	0.59	0.846	0.701	3.701	skewness	0.397	1.029	-5.399	9.18
Kurtosis	5.578	1.861	0.98	15.99	Kurtosis	-0.815	0.011	28.328	174.04
Min	0.1291	-0.34	9.7973	5	Min	1	1	0.9251	-21456010
Max	1.9378	0.6656	18.4376	9	Max	7	6	0.9999	38264941

Table 2 shows the characteristics of the research variables. For instance, average of collected variables is shown in second row which is as much as 0.129 for average efficiency of assets. Sixth row demonstrates the variance and scatter of the variables about average and the variance of the assets efficiency is 0.016.

Hypotheses Tests

First Hypothesis Test

Null and opposite hypothesis are defined as follows:

H_0: there is no meaningful relationship between the period of presidency of the company management board and the future risk of dishonor of the company.

H_1: there is a meaningful relationship between the period of presidency of the company management board and the future risk of dishonor of the company.

Table 2: Test of the first hypothesis

Hypothesis	Correlation factor	Determination factor	Modified Det. Factor	Estimation criterion error	Durbin – Watson Test
1	.499	.440	.305	1.66398	1.721

According to table 2, correlation factor of the two variables of the period of presidency of the company management board and the future risk of dishonor in cement industry is 0.499. This value demonstrates the 5% error in the meaningful relationship between the variables in cement industry. According to output of SPSS, table shows that since sig in less than 5%, H_0 is rejected in the 5% error and the relationship between the variables is confirmed. Moreover, the modified calculated determination factor shows 0.305 which is an appropriate value and provides a good fitting for changes in variable of future risk dishonor in cement industry using the period of presidency.

One of the assumptions in regression is independence of errors. If this assumption is rejected and the errors are correlated, using regression is not practical. Statistics of Durbin – Watson is used for investigation of the independence of errors. If the value of the parameter is 1.5 ~ 2.5, the assumption of the correlation of errors is rejected and we can use regression. As shown in table 2, the value of this parameter is 1.721 and this means that errors are independent and the error has no correlation and we can use regression. In this section, we proceed to the test of meaningfulness using table ANOVA:

Table 3: Regression variance analysis for the period of presidency and future risk of dishonor

Model		Sum of squares	df	Mean squares	F	Sig
1	Regression	636.636	12	106.106	15.638	.000
	Remainder	7063.262	50	6.785		
	Total	7699.899	62			

Table 3 shows the variance analysis between variables future risk of dishonor as dependent variable and the period of presidency of the company management board. According to this output, meaningfulness of the regression model is tested through ANOVA table and using statistical hypotheses:

$$\begin{cases} H_0: & \text{There is no linear relationship between two variables} \\ H_1: & \text{There is a linear relationship between two variables} \end{cases}$$

Since sig is less than 5%, the assumption of linear relationship between two variables is confirmed. Now, we proceed to finding the relationship.

In output of the table 4 and in column B, constant values and the coefficient of independent variable are presented whose equation is as follows:

$$\text{Risk}_{it+1} = -0.347 * Ceochange_{it} - 0.203 * Ceochange_{it-1} - 0.069 * Debt_{it} - 0.031 * yo2_{it} - 0.038 * yo4_{it} - 0.036 * yo5_{it} - 0.04 * yo6_{it} - 0.054 * yo7_{it}$$

According to output of the table 4, other columns of the table include the criterion of the coefficients of the column B, statistic t and sig used to testing the equality of the coefficients of column having zero value. Now, if α and β are constant value and the slope of the regression line, test of hypotheses can be written as follows:

$$\begin{cases} H_0: \beta = 0 \\ H_1: \beta \neq 0 \end{cases} , \quad \begin{cases} H_0: \alpha = 0 \\ H_1: \alpha \neq 0 \end{cases}$$

Since in this output, (sig=0), test of equality of regression factor and constant value is zero and less than 5%, therefore, the assumption of equality of the coefficients is rejected and they cannot be discarded from regression.

Table 4: Coefficients of regression equation for independent and control variables

Hypotheses	**Abbreviation**	**unstandardized Coefficients**		**Standardized Coefficients**	***t***	**Sig.**	**Collinearity Statistics**	
		B	**Std Error**	**Beta**			**Tolerance**	**Inflation Factor**
1	(Constant)	0.049	0.119		0.413	0.680		
	CEOCHANGE.1	-0.347	0.058	-0.331	-5.983	0.000	0.45	2.222
	CEOCHANGE.0	-0.203	0.062	-0.125	-3.281	0.001	0.31	3.23
	DEBT	-0.069	0.031	-0.298	-2.224	0.031	0.461	2.168
	ROA	0.094	0.047	0.394	1.985	0.053	0.21	4.757
	LNASSET	-0.002	0.007	-0.042	-0.235	0.815	0.254	3.932
	DIRECTit	-0.004	0.008	-0.048	-0.417	0.679	0.629	1.59
	y2	-0.031	0.014	-0.308	-2.166	0.035	0.408	2.449
	y3	-0.029	0.015	-0.292	-1.983	0.053	0.38	2.631
	y4	-0.038	0.014	-0.387	-2.724	0.009	0.41	2.439
	y5	-0.036	0.015	-0.368	-2.421	0.019	0.359	2.788
	y6	-0.04	0.016	-0.399	-2.396	0.02	0.298	3.353
	y7	-0.054	0.016	-0.548	-3.479	0.001	0.334	2.995

Tests corresponding to each of the regression coefficients are used for measuring the appropriate model of regression. In this test, statistics t is used for testing the meaningfulness of the coefficients of the independent variables. It must be noted that in fact, it is a partial or marginal test since regression

coefficients depend upon all other regression variables present in the model. Therefore, a test for effect of the X_i on model depends on other variables of the model.
The way we judge depends upon the value of statistics t and the level of meaningfulness. If the level is below 5%, coefficient of the independent variable is meaningful.

Test of Second Hypothesis

H_0: there is no meaningful relationship between the period of presidency of the company management board and the sales growth of the company.

H_1: there is a meaningful relationship between the period of presidency of the company management board and the sales growth of the company.

Table 5: Test of the second hypothesis

Hypothesis	Correlation factor	Determination factor	Modified Det. Factor	Estimation criterion error	Durbin – Watson Test
1	.775	.601	.599	2.34842	1.624

According to table 5, correlation factor of two variables is as much as 0.775. This value shows the error of 5% in the meaningfulness of the relationship between two variables.

Since sig is less than 5%, H_0 hypothesis is rejected in error level of 5% and the correlation between two variables is confirmed. Moreover, the modified determination factor is calculated to be 0.599 which is an appropriate value and provides a good fitting of the changes of the variable of the sales growth using the period of presidency.

The value of the statistics Durbin – Watson is 1.624 according to table 5 which shows that errors are independent and the assumption of correlated errors is rejected and hence, we can use regression.

Table 6: Regression variance analysis for the period of presidency and sales growth

Model		Sum of squares	df	Mean squares	F	Sig
1	Regression	8602.740	12	1433.790	259.977	.000
	Remainder	5702.576	50	5.515		
	Total	14305.316	62			

As stated in the case of the first hypothesis, since sig is less than 5%, the assumption of linear relationship between the variables is confirmed. In output of table 7, in column B, constant value and the coefficient of the independent variable of the regression equation are presented and the equation is as follows:

$$\text{GSale}_{\text{it}-1} = 0.424 * Ceochange_{it} + 0.178 * Ceochange_{it-1}$$

According to output of table 7, other columns of the table 7 include the criterion of the coefficients of column B, statistics t and sig and for the purpose of testing equality, each of the coefficients of the column B are equal to zero. Similar to reasoning used in the first hypothesis, since sig=0, test of equality of the regression coefficients and constant values are equal to zero and less than 5%.

As a result, the assumption of the equality of two coefficients is rejected and they cannot be deleted from regression.

Table 7: Coefficients of regression equation for independent and control variables

Hypotheses	Abbreviation	unstandardized Coefficients		Standardized Coefficients	*t*	Sig.	Collinearity Statistics	
		B	Std Error	Beta			Tolerance	Inflation Factor
1	(Constant)	11.843	11.402		1.039	0.304		
	CEOCHANGE.1	0.424	0.061	0.412	6.95	0.000	0.45	2.222
	CEOCHANGE.0	0.178	0.055	0.265	3.236	0.000	0.31	3.23
	DEBT	1.891	2.97	0.108	0.637	0.527	0.461	2.168
	ROA	-0.669	4.537	-0.037	-0.147	0.883	0.21	4.757
	LNASSET	0.72	0.72	0.229	1.001	0.322	0.254	3.932
	DIRECTit	-0.036	0.81	-0.007	-0.045	0.964	0.629	1.59
	y2	-0.961	1.355	-0.128	-0.71	0.481	0.408	2.449
	y3	-1.262	1.404	-0.169	-0.898	0.373	0.38	2.631
	y4	1.537	1.352	0.205	1.137	0.261	0.41	2.439
	y5	0.375	1.446	0.05	0.26	0.796	0.359	2.788
	y6	-0.115	1.585	-0.015	-0.073	0.942	0.298	3.353
	y7	2.723	1.498	0.364	1.818	0.075	0.334	2.995

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RESULTS AND DISCUSSION

According to tests and analyses carried out through regression and correlation and as shown in table 2, it was found out that there is a positive correlation factor for the period of presidency and the risk of future dishonor of the companies of the cement industry which are accepted in Tehran stock market. In table 3, statistics F and the level of meaningfulness demonstrates the meaningfulness of the multiple regression in certainty level. Therefore H_0 hypothesis will be rejected and there is a meaningful relationship between the period of presidency and the risk of future dishonor of the companies. The value of the statistics t obtained for the variable of the period of presidency of the company management board illustrates the meaningfulness of the coefficient of the variable in the level of 5% in presence of control variables. Moreover, for second hypothesis, according to tests and analyses carried out through regression and correlation, we concluded that there is a positive correlation factor for the period of presidency and the sales growth of the companies of the cement industry which are accepted in Tehran stock market. Value

of statistics F and the level of meaningfulness demonstrate the meaningfulness of the multiple regressions in certainty level. Therefore H_0 hypothesis will be rejected and there is a meaningful relationship between the period of presidency and the companies' sales growth. Furthermore, the value of statistics t obtained for the variable of the period of presidency of the company management board demonstrates the meaningfulness of the variable in 5% level of meaningfulness. Therefore, according to results obtained from the test of first hypothesis, there is an inverse relationship between the period of presidency and the risk of future dishonor of the companies which shows that by extending the period, the risk of future dishonor decreases and vice versa. Results on this hypothesis agrees with one that investigated the relationship between the period of presidency and risk of future dishonor in Chinese stock market and found an inverse relationship between these two parameters. Furthermore, the comparison of the results of this research with other similar works summarized in table 8 is also presented.

Table 8: Comparison of results of the first hypothesis with previous works

Hypothesis	Inverse relationship of variables	Similar works
1	Confirm	Wei (2013)
	Confirm	James (2011)
	Confirm	Brookman (2009)

According to results obtained from the first hypothesis, it is recommended to stockholders and other investors to concentrate more on the companies having more changes in management (less stability during the period of presidency of their managers), since according to results of this hypothesis, the probability of the risk of future dishonor in such companies, due to changes in the management of the company, moreover, due to unfamiliarity of the top managers with internal conditions of the company and also the expenditures imposed as a result of the management changes, the probability of the future dishonor increases.

On the other hand, for second hypothesis, according to obtained results there is a cirect relationship between the period of presidency and the growth of company sales. That is, by extending the period of presidency, sales of the cement industry increases and vice versa. Results of the research are in agreement with that of Wei Ting (2013) which investigated the relationship between the period of presidency and the growth of company sales in Chinese stock markets and found results which demonstrated that there is a direct relationship between the period of presidency and the growth of company sales.

Table 9: Comparison of the results of the second hypothesis with previous works

Hypothesis	Inverse relationship of variables	Similar works
2	Confirm	Wei (2013)
	Confirm	Bergstresser and Philippon (2006)

According to results obtained from the second hypothesis, it is recommended to investors that concentrate more in companies which have longer period of presidency of management board, since according to results, probability of increasing the sales of cement industry in such companies will increase due to lower changes in management and familiarity with internal conditions of the company. Moreover, when the period of presidency in a company increases, management will have more efforts for more long term planning and consequently, sales of cement in coming years will increase and eventually leads to higher efficiency for stockholders.

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