The Relationship between the Ability to Manage and Efficiency, Economic and Market Value of Companies Listed on the Tehran Stock Exchange

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Abstract: The aim of this research was to study the relationship between the ability to manage and efficiency, economic and market value of companies listed on the Tehran Stock Exchange. For this purpose, the data of 102 companies listed on Tehran Stock Exchange during the years of 2010 to 2014 using Rahavard modern software and Web Kedal, panel data models, regression test preconditions (including Chow & Hausman) and generalized least squares estimation method was used. The results showed that a direct relationship between the ability to manage and efficiency, economic and market value of companies listed on the Tehran Stock Exchange was established.

Keywords: Management, Management Ability, Performance of the Company, Tehran Stock Exchange.

Introduction

Industrial revolution and its continuation in nineteenth-century Europe afforded the creation of large factories and the implementation of major schemes such as construction of the national rail networks which this needed huge monetary investments in such a way that its performing was beyond one or several financial facilities of an investor and even governments of that time. However, the first joint-stock company was constituted using two great and useful achievements to the industrial revolution; organizing and collaboration which the responsibility of shareholders is limited to the amount of their investment. This new format is not a perfect solution for providing risk capital and commercial distribution. From that time until now, in most cases, the power and authority to decide on joint stock companies are often in the authority of managers who conflict of interest with external interest groups, particularly shareholders.

This conflict of interest which is the result of separation of ownership from management, of past times, has attracted the attention of many people. Several studies are performed on the identification of problems arising from the separation of ownership from the management and researchers have investigated the reasons of conflicts between managers and shareholders. In order to adjust conflicts of interest, criteria for evaluating their performance and providing a basis for determining incentive payments to them based on the results of these assessments have been developed and used (Mahdavi & Hosseini, 2006). Identifying how to improve the performance of the company includes an important part of financial studies over the years. One of the ways that has attracted a lot of attention over the past decade is the ability of the management. Previous studies have emphasized the importance of quality management with their study, the relationship between ability and performance management now becomes

transparent. The ability to manage and human capital are considered an intangible asset that will result in more efficient operational management (Panayiotis, 2013). In addition, more ability will result in management to projects with bigger present net value and better practical implementation (Chemmanur & Paeglis, 2005). Managers in organizations are some developing policy-makers and performance of organizations is related to their power. Managers provide the cause of growth and development or corruption agencies using power sources and this depends on the essence and how to use the power and resources (Izadinia et al., 2014).

Measurement of the ability or talent management, such as survey management focus, performance, investment decisions, compensation and corporate governance and productivity differences among countries are the focus of many questions of the research. Previous studies show that features of a specific manager (such as ability, talent, fame and title) influence on economic output (like income and profit). Therefore, they are practically equally significant as they are important as in economic studies, financial management and accounting (Demerjian et al., 2012). In addition, previous studies have provided evidence on that there is a direct relationship between management quality and performance of IPO (Chemmanur & Paeglis, 2005). Similarly, Chemmanur et al (2009) showed that there was a relationship between management quality of investment and financial policies of the companies. Therefore, the aim of this research was to study the relationship between the ability to manage and efficiency, economic and market value of companies listed on the Tehran Stock Exchange.

Materials and Methods

The research method was descriptive and correlational. The population consists of all companies listed on the Tehran Stock Exchange during 2010 to 2014. Companies that met the following criteria were selected and their data were analyzed:

1. Their fiscal period is ended to 12.29 each year so that we can put data together and this is used in the form of panel and compilation (based on tests of presupposition).

2. During the period of investigation, they have no change in the fiscal period so that the results of financial performance are comparable.

3. Data for the variables during 2010 to 2014 are available so that calculations can be performed without flaw.

4. They do not belong to the investment companies, financial and credit institutions, banks, insurance companies and holdings.

In this research, independent variables included Managerial Ability$_{i,t}$ which the following regression model was used to calculate:

$$FirmEfficiency_{i,t} = \beta_0 + \beta_1 \ln(TotalAssets)_{i,t} + \beta_2\, PositiveFreeCashFlow_{i,t} + \beta_3 \ln(Age)_{i,t} + \varepsilon_{i,t}$$

Firm Efficiency $_{i,t}$ = Company performance of i in year t will be the sum of sales revenue to cost of goods sold, general expenses, administrative and sales and calculated net property, plant and equipment;

Ln (Total Assets)$_{i,t}$ = natural logarithm of the total assets of the company i in year t;

Positive Free Cash Flow $_{i,t}$ = positive free cash flow of company i in year t, which is net cash flow caused operating activities minus capital expenditure (Rezvaniraz et al, 2009); and $\ln(Age)_{i,t}$ = natural logarithm of the number of years of membership in the exchange company i in year t.

In order to explain the method of calculation for variable of the management of efficiency, it should be noted that in the first step, the above model in the overall level data is estimated and after calculating the coefficient (including β_0, β_1, β_2 and β_3), in the second step, the mentioned model for each company - year is used and the value of model waste ($\varepsilon_{i,t}$) in the level of each company-year is calculated which is used as managerial performance. The model waste ($\varepsilon_{i,t}$) for each company in each year indicates the value of dependent variable which is not explainable by the above model and this represents management performance. Also, control variables consisted of Leverage$_{i,t}$ (financial leverage of the company i in year t, which is the ratio of debt to assets), Size$_{i,t}$ (size of company i in year t which is the natural logarithm of the market value of the company's equity), MtB$_{i,t}$ (growth opportunities that the company i in year t is equal to the market value of equity to book value of equity). The dependent variables were calculated using regression models:

1) $Return_{i,t} = \beta_0 + \beta_1\, Managerial\ Ability_{i,t} + \beta_2\, Leverage_{i,t} + \beta_3\, Size_{i,t} + \beta_4\, MtB_{i,t} + \varepsilon_{i,t}$
2) $EVA_{i,t} = \beta_0 + \beta_1\, Managerial\ Ability_{i,t} + \beta_2\, Leverage_{i,t} + \beta_3\, Size_{i,t} + \beta_4\, MtB_{i,t} + \varepsilon_{i,t}$
3) $MVA_{i,t} = \beta_0 + \beta_1\, Managerial\ Ability_{i,t} + \beta_2\, Leverage_{i,t} + \beta_3\, Size_{i,t} + \beta_4\, MtB_{i,t} + \varepsilon_{i,t}$

Return$_{i,t}$ = company return i in year t which is used three criteria to calculate the return on assets (ratio of net profit to total assets of companies), return on equity of shareholders (ratio of net profit to total equity of shareholders); return on equity (the difference between the stock price at the end of this year and the stock price at the end of last year, plus stock dividends divided by stock price at the end of the previous year). EVA$_{i,t}$ = EVA

company i in year t (net operating profit after tax, minus the cost of capital expenditure) divided by total assets. $MAV_{i,t}$ = market added value i in year t (minus the market value of equity, book value of equity) divided by total assets. Investment $_{i,t}$ = capital expenditure of firm i in year t, which is the ratio of capital expenditure derived from the cash flow statement to total assets. Resources $_{i,t}$ = company sources i in year t, which is the company's long-term net debt during the year plus income from operating activities divided by total assets. Debt $_{i,t}$ = company Debt i in year t, which is the company's long-term net debt divided by total assets during the year. Information Asymmetry $_{i,t}$ = company information asymmetry i in year t which this is used by the percentage difference between bid and offer prices. By the use of the Average Bid (BP) and the average price of an offer to sell (AP), the difference of the Average bid and sales is achieved. The more this difference is, the more information asymmetry will be:

$$\%SPREAD = (AP-BP) / [(AP+BP)/2]$$

For data analysis, regression, Fisher F-test, t significance test and Hausman test were used. Also, to choose between panel data and data compilation methods, Limer F-test was used for correlation test for the lack of self-solidarity, Durbin-Watson test for the test of heterogeneity of variances, White test and also to test the stability of test variables Fisher was used.

Results

The results of the first test model using fixed effects model and generalized least squares estimation method (EGLS) are presented in Table 1. According to the results presented in Table 1, since the t-statistic for variable of the ability to manage is more than +1.965 and its significance level is smaller than 0.05, there is a significant and direct relationship between the ability to manage and return on assets of companies listed on the Tehran Stock Exchange. However, the relationship between the management of company and return of the company will be accepted. Durbin-Watson statistic is also 2.01 which are between 1.5 and 2.5. Meanwhile, the significance level of the F-statistic is 0.000 which is lower than 0.05 and represents the model significance.

Table 1. Test results of the relationship between the ability to manage and return on assets.

Variable	Coefficients	Standard error	t	Sig.
Fixed value	0.063	0.053	1.175	0.24
The ability to manage	0.215	0.012	17.913	0.000
Financial leverage	-0.326	0.022	-14.783	0.000
Size of the company	0.001	0.003	0.316	0.752
Growth opportunities	0.006	0.001	6.162	0.000
F statistic		70.464	Coefficient of determination	0.951
F statistic significant level		0.000	Adjusted coefficient of determination	0.937
Method of EGLS (fix potential effects of heterogeneity of variance)			Durbin-Watson	2.01

The result of the test mentioned using the model of fixed effects and generalized least squares estimation method (EGLS) is presented in Table 2. According to the results presented in Table 2, since the t-statistic for variable of the ability to manage is more than +1.965 and its significance level is smaller than 0.05, there is a significant and direct relationship between the ability to manage and return on equity of shareholders of the companies listed on the Tehran Stock Exchange. Durbin-Watson statistic is also 2.01 which are between 1.5 and 2.5. Meanwhile, the significance level of the F-statistic is 0.000 which is lower than 0.05 and represents the model significance. The adjusted coefficient of determination of the model used is about 93% representing about 93 percent of the dependent variable is explained by the independent variables that the amount is acceptable.

Table 2. Test results of the relationship between the ability to manage and return on equity of shareholders.

Variable	Coefficients	Standard error	t	Sig.
Fixed value	-0.226	0.132	-1.715	0.087
The ability to manage	0.43	0.027	15.793	0.000
Financial leverage	-0.316	0.057	-5.481	0.000
Size of the company	0.015	0.01	1.535	0.125
Growth opportunities	0.018	0.002	6.446	0.000
F statistic		67.095	Coefficient of determination	0.948
F statistic significant level		0.000	Adjusted coefficient of determination	0.934
Method of EGLS (fix potential effects of heterogeneity of variance)			Durbin-Watson	2.01

According to the results presented in Table 3, since the t-statistic for variable of the ability to manage is more than +1.965 and its significance level is smaller than 0.05, there is a significant and direct relationship between the ability to manage and stock return of companies listed on the Tehran Stock Exchange. Durbin-Watson statistic is also 2.212 which are between 1.5 and 2.5. Meanwhile, the significance level of the F-statistic is 0.000 which is lower than 0.05 and represents the model significance.

Table 3. Test results of the first hypothesis and stock return.

Variable	Coefficients	Standard error	t	Sig.	Variance inflation factor
Fixed value	-0.624	0.462	-1.351	0.177	-
The ability to manage	0.414	0.183	2.265	0.024	1.093
Financial leverage	-0.124	0.232	-0.537	0.591	1.021
Size of the company	0.018	0.029	0.619	0.536	1.005
Growth opportunities	0.186	0.028	6.479	0.000	1.109
F statistic		15.263	Coefficient of determination		0.115
F statistic significant level		0.000	Adjusted coefficient of determination		0.107
Significance level of Arch test		0.373	Durbin-Watson		2.12

The results of the second test model using random effects model and generalized least squares estimation method (EGLS) are presented in Table 4. According to the results presented in Table 4, since the t-statistic for variable of the ability to manage is more than +1.965 and its significance level is smaller than 0.05, there is a significant and direct relationship between the ability to manage and economic value added of companies listed on the Tehran Stock Exchange. Durbin-Watson statistic is also 1.639 which is between 1.5 and 2.5. Meanwhile, the significance level of the F-statistic is 0.000 which is lower than 0.05 and represents the model significance.

Table 4. Test results of the ability to manage and economic value added.

Variable	Coefficients	Standard error	t	Sig.
Fixed value	-0.164	0.06	-2.713	0.006
The ability to manage	0.252	0.019	12.704	0.000
Financial leverage	-0.158	0.027	-5.721	0.000
Size of the company	0.005	0.004	1.275	0.202
Growth opportunities	0.006	0.002	2.391	0.017
F statistic	60.953		Coefficient of determination	0.336
F statistic significant level	0.000		Adjusted coefficient of determination	0.33
Method of EGLS (fix potential effects of heterogeneity of variance)			Durbin-Watson	1.639

The result of the third test model using random effects model and generalized least squares estimation method (EGLS) is presented in Table 5. According to the results presented in Table 5, since the t-statistic for variable of the ability to manage is more than +1.965 and its significance level is smaller than 0.05, there is a significant and direct relationship between the ability to manage and market value asset of companies listed on the Tehran Stock Exchange. Durbin-Watson statistic is also 1.658 which is between 1.5 and 2.5. Meanwhile, the significance level of the F-statistic is 0.000 which is lower than 0.05 and represents the model significance.

Table 5. Test results of the ability to manage and market value added.

Variable	Coefficients	Standard error	t	Sig.
Fixed value	0.461	0.164	2.809	0.005
The ability to manage	0.328	0.057	5.755	0.000
Financial leverage	-1.484	0.077	-19.055	0.000
Size of the company	-0.01	0.01	-1.000	0.317
Growth opportunities	0.318	0.007	39.86	0.000
F statistic	530.422		Coefficient of determination	0.815
F statistic significant level	0.000		Adjusted coefficient of determination	0.813
Method of EGLS (fix potential effects of heterogeneity of variance)			Durbin-Watson	1.658

Discussion and Conclusion

The aim of this research was to study the relationship between the ability to manage and efficiency, economic and market value of companies listed on the Tehran Stock Exchange. The results showed that there was a significant and direct relationship between the ability to manage and efficiency of companies listed on the Tehran Stock Exchange. Also, there was a significant and direct relationship between the ability to manage and economic value added of companies listed on the Tehran Stock Exchange. Other findings suggest a direct relationship between the ability to manage and market value added of companies listed on the Tehran Stock Exchange. The findings of the present research are consistent with the results of studies such as Raheman and Nasr (2007), Chatterjee (2012), Kroes and Manikas (2014), Yaqoubnejad et al (2010), Izadinia and Taki (2010). Another result of this study is that the ability to manage has a direct and significant effect on information asymmetry which is also in conflict with the results of Demerjian et al (2013), Park et al (2015), Izadinia et al (2014), Bozorgasl and Salehzadeh (2014). However, this result is considered to some extent in conformity with the result of Li (2015). It should be noted that Demerjian et al (2013) discussed the relationship between the ability to manage and the quality of their profits in a study titled "ability to manage and earnings quality".

They considered four factors restated financial statements, earnings stability, predictability and quality of accruals for bad debts as qualitative criteria profits and they used accounting variables as a measure of the ability to manage. They concluded in their research that the ability to manage earnings quality was directly related to any of the four criteria. Park et al also discussed on the ability to manage the effect on tax evasion in a study entitled "the ability to manage and tax evasion: evidence from Korea". Their studies showed that there was a significant inverse correlation between tax evasion and value of the company as well as the ability to manage and tax evasion. In addition, the ability to manage leads to undermining the inverse relationship between tax evasion and firm value. According to the results of research based on that the company's ability to manage has a direct relationship with the company's market value, decision makers and board members of listed companies in Tehran Stock Exchange are proposed that top managers with high ability be used in order to increase the company's market value. Investors in companies listed on the Tehran Stock Exchange are also proposed that when making investment decisions and buying and selling shares, the ability to manage the business is taken into account.

Also, according to the findings that the ability of the management of the company has direct relationship with the company's capital expenditure, decision makers and board members of listed companies in Tehran Stock Exchange are proposed that if appropriate and if needed to increase investment company (according to the company's status in terms of life cycle), managers with high potential are used in order to increase investment in the company. Investors in companies listed on the Tehran Stock Exchange are also recommended that when making investment decisions and buying and selling shares, the ability to manage the business is taken into account because the company's investments are increased which could have numerous consequences.

Conflict of interest
The authors declare no conflict of interest

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