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Investigating the relationship between management ability and cash final value in Tehran Stock Exchange

Bita qobakhlou
Graduated from the Department of Management (Finance) of Azad University of Tehran Markaz,

Shahab khaleqi
Graduated from the Department of Management (Business_Marketing) of Payame Noor University of Garmsar

ABSTRACT

Managers pay attention to a variety of information, including market information, accounting information, and future operating cash flows, in future investment decisions. The accounting system provides additional information for managers to make decisions about capital projects. It is unclear how managers choose between consuming and holding cash reserves for their own benefit. Information asymmetry theory, agency theory, balance theory, financing hierarchy theory and free cash flow theory are some of the theories related to the level of holding cash of companies. For this purpose, the relationship between management ability and the cash final value in the Tehran Stock Exchange was examined. The required data of the models were collected from the companies listed on the Tehran Stock Exchange from 2013 to 2018 for 5 years and offered their shares in the Tehran Stock Exchange and their transactions were not interrupted for more than 6 months. Accordingly, 132 companies were selected as a statistical sample by systematic elimination method. The research method is applied in terms of aim and library in terms of information and data collection method. The results indicate that there is a significant and positive relationship between management ability and the cash final value of the companies listed on the Tehran Stock Exchange. The results also showed that with increasing management ability, the final value of cash will increase.

Keywords: *Managerial Ability, Cash Final Value, Tehran Stock Exchange*

INTRODUCTION

Capital structure has been proposed as the most important parameter affecting the influence of companies and their orientation in capital markets. The current changing environment has made the rating of companies to depend on their capital structure in terms of credit. It has made their strategic planning as effective resources for the goal of maximizing shareholder wealth. Cash can be thought of as the beginning and end of the operational cycle, meaning that each cycle of a business unit operation begins with payment or a commitment to pay cash and ends with the receiving an obligated cash (Abbaszadeh and Manzarzadeh, 2011). The ability of a profit unit to obtain cash is an important criterion for deciding and judging that unity. Users of financial information to judge the future of cash flow in a profit unity specifically pay attention to the impact of events and activities that lead to inflows or outflows of cash Investors are always interested in buying shares from those profit units that have rich cash flow, and they avoid investing in that group of profit units that do not have free cash. The problem of shortage of cash must be eliminated by borrowing, increasing capital, or even sometimes receiving government subsidies. Providers of loans, credit and other financial facilities also pay special attention to the cash flow of such profit units (Rezazadeh and Zarei Moravaj, 2009).

Based on the balance theory, companies determine the optimal amount of cash by establishing a balance between the benefits and costs of holding cash. Based on the theory of financing hierarchy, the manager tends to accumulate cash so that he can finance from inside the company in the first stage and does not go outside the company (Hasas Yegane et al., 2006). Based on the free cash flow theory, managers are motivated to accumulate cash to increase the resources under their control to be able to use the power of judgment and discretion in c investment decisions of the company (Hasas Yegane et al., 2008). Also, establishing a balance between the available cash and the cash needs of each profit unit is one of the management goals. Users of financial information are also aware of the importance of management decisions in this area. The reasons for cash inflows into the profit unit and the reasons for cash outflows from it reflect the management decisions regarding short-term and long-term operational planning and investment and financing plans of the profit unit. A company's investors, creditors, sellers, and employees consider the company as a source of cash to pay dividends or interest, repay loans, and pay for goods and services, and pay salaries. Thus, these individuals are interested in being aware of the company's ability to generate positive cash flows. The present study was an attempt to examine the importance of the role of management ability on the cash final value.

Theoretical foundations of research

The cash final value

Cash can be considered as the beginning and end of the operating cycle, meaning that each cycle of a business unit begins with payment or a commitment to pay cash and ends with the receiving obligated cash (Kashanipour, Rahmani and Parchini Parchin, 2009). The ability of a profit entity to obtain cash is an important criterion for deciding and judging that unit. Users of financial information to judge the future of cash flow in a profit unit specifically pay attention to the impact of events and activities that lead to cash inflows or outflows of cash in that unit. Investors are always interested in buying shares from those profit units that have rich cash flow, and they avoid investing in that group of profit units that do not have free cash. The problem of shortage of cash must be eliminated by borrowing, increasing capital, or even sometimes receiving government subsidies. Providers of loans, credits and other financial facilities also give special importance to the circulation of cash of such profit units (Alivar, 1994). Also, establishing a balance between the available cash and the cash needs of each profit unit is one of the management goals. Users of financial information are also aware of the importance of management decisions in this area. The reasons for cash inflows into the profit unit and the reasons for cash outflows from it reflect the management decisions regarding short-term and long-term operational planning and investment and financing plans of the profit unit. In other words, investors, creditors, sellers, and employees of a company consider that company as a source of cash to pay dividends or interest expenses, repay loans, and pay for goods and services, and pay salaries. Thus, these individuals are interested in being aware of the company's ability to generate positive cash flows (Francis and Krishnan, 1999).

Management ability

In general, management ability and its various measures is one of the dimensions of organizational capital, which in a general classification is a component of intangible assets. Demirjian et al. define management ability as the efficiency of managers over competitors in converting company resources into revenue. These resources in companies include inventory

costs, general, sales, and administrative costs, tangible fixed assets, operating leases, research and development costs and intangible assets of the company (Demirjian, 2012).

It is believed that more capable managers have a better understanding of technology and industry trends and can more accurately predict product demand. Also, more appropriate investment in more valuable projects and efficient management of employees are the characteristics of capable managers. It is expected that these managers can earn more by using a certain level of resources in the short term or achieve a certain level of revenue by using less resources (maximizing the efficiency of the resources used) (Lin and Ming, 2009). The most well-known model for measuring the ability of managers is the model presented by Demirjian et al. (2012). For the first time, they designed a model that quantitatively measures management ability using accounting variables. In this model, by measuring the efficiency of the company and then entering it into multivariate linear regression as a dependent variable and controlling the inherent characteristics of the company, the management ability is calculated.

Demirjian et al. (2012) used data envelopment analysis model to measure management ability. Data envelopment analysis model is a statistical model that is used to measure system performance using input and output data. In the model used in this research, sales revenue was considered as output and 7 other variables, including the cost of goods sold, general, sales and administrative costs, net assets, machinery and equipment, operating lease, research and development costs, goodwill and intangible assets were considered as inputs, which largely cover the management choice in achieving the desired revenue. The company performance model, like the Fama and French (1997) model, is designed for the industry so that the performance of each company can be compared with companies operating in the industry. In this model, a specific coefficient is also considered for each of the input variables, because the effect of all input variables on the output (sales) is not the same. The value calculated for the performance of the company is a number between zero and one, in number 1 indicates a maximum efficiency. The lower number indicates the lower efficiency of the company. In any industry, the company with the highest efficiency is the leader in that industry (Lev, Petrovits, & Radhakrishnan, 2010).

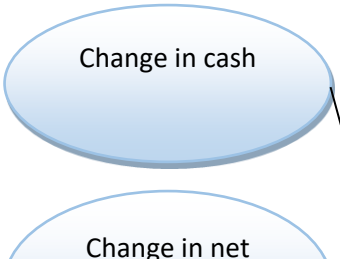

Figure 1: Conceptual research model (Jean and Park, 2017)

Methods

The present study is a descriptive and inductive research and applied in terms of aim. This study is correlational in terms of implementation method and post-hoc in terms of data. Based on the objectives of the research, the statistical method is a mixed correlational (time series and cross-sectional) to examine the relationship between variables through regression. To test the research hypotheses, the information of financial statements of companies should be used. For this purpose, the companies listed on the Tehran Stock Exchange are the statistical population of the study. The study period is from the beginning of 2013 to the end of 2017. Therefore, in this study, the information of all companies that have offered their shares in the Tehran Stock Exchange in the mentioned 5-year period, and their stock transactions have not been interrupted for more than 6 months and their financial year are the last day of a given year, and are not a part of investment companies, banks and insurance, was used. Finally, after applying the above

criteria in the selection of samples, 132 companies were selected as the statistical sample of the study. To access the financial statements and market prices of the sample research companies, Rahavard- Novin software database was used. Multivariate linear regression model was used to test the research hypotheses. The hypotheses of this study are based on the results of Jean and Park (2017) and were presented as follows:

1- There is a significant relationship between management ability and the cash final value

2- In companies with higher management ability, the cash final value is higher.

The following models are used to test the hypotheses in this study:

$$EXRET_{it} = \beta_0 + \beta_1 \frac{Ability_{it}}{M_{it}} + \beta_2 D1 * \frac{Ability_{it}}{M_{it}} + \beta_3 \frac{\Delta CASH_{it}}{M_{it}} + \beta_4 \frac{\Delta Earnings_{it}}{M_{it}} + \beta_5 \frac{\Delta NetAsset_{it}}{M_{it}} + \beta_6 \frac{\Delta IntrestExpense_{it}}{M_{it}} + \beta_7 \frac{\Delta Divindedns_{it}}{M_{it}} + \beta_8 Leverage_{it} + \varepsilon_{it}$$

In the first model above, if β1 is significant, the first hypothesis of the research is confirmed, otherwise, it is rejected. Finally, in the above model, if β2 is significant, the second hypothesis of the research is confirmed, otherwise, it is rejected.

Its components are:

β0 - intercept;

EXRETit – cash final value of company i in year t;

Abilityit- the management ability of the company i in year t;

Mit- market value of equity of company i in year t;

ΔCASHit – cash change of company i in year t;

ΔEarningsit- change in net earnings of company i in year t;

ΔNetAssetit- change in the net asset value of the company i in year t;

ΔIntrestExpenseit- change the interest expenses of the company i in year t;

-ΔDivindedndsit- change in dividend of company i year in t;

ΔLeverageit- leverage ratio of company i in year t; and

e- Model error.

Cash final value (EXRET): In this study, surplus stock returns are used to measure the cash final value in accordance with the research of Jean and Park (2017). The surplus of the company's share return will be measured in terms of the difference between the actual return and the expected return.

ABILITY: According to the research conducted by Demirjian, Lu, Lewis and Mc Vey (2012), the managers' ability is obtained in this way.

$$Firm\ Efficiency_{it} = \beta 0 + \beta 1 Size_{it} + \beta 2 MarketShare_{it} + \beta 2 Free\ Cash\ Flow_{it} + \beta 2 Age_{it} + \beta 2 MForeign\ Currency\ Indicator_{it} + \varepsilon_{it}$$

Where:

Firm efficiency: which is obtained from the calculations of data envelopment analysis pattern *.
The input and output variables of data envelopment analysis are as follows:

$$\max \theta_v = \frac{Sales}{v1CoGs + V2SG\&A + V3NetPPE + V4OpsLease + V5GoodWill + V6Intan}$$

Where,
Sales: derived from sales and revenue stated in the financial statements.
COGS: The cost of goods sold, which is extracted from the financial statements.
G SG&A: General, sales and administrative costs, which are derived from the sum of general and administrative and sales costs in the financial statements.
P NetPPE: The net Property Plant and Equipment, which is extracted from the text of financial statements.
OpsLease: The cost of operating leases extracted from the text of financial statements.
Goodwill: Goodwill purchased that is extracted from the text of the financial statements.
Lan Intlan: The net balance of intangible assets that is extracted from the text of financial statements.

To build the model, suppose n units are available and the purpose is to evaluate the efficiency of the unit (zero unit or decision-making unit) that uses $x_{m,0},\dots,x_{2,0},x_{1,0}$ inputs to generate $y_{s,0},\dots,y_{2,0},y_{1,0}$ output.

If the weights assigned to the outputs (or the price of the outputs) are denoted by $u_m,\dots,u_2,u_1$ and the weights assigned to the inputs (or the cost of purchasing the inputs) are denoted by $v_m,\dots,v_2,v_1$, the following fraction must be maximized to find the maximum efficiency.

$$\frac{\sum_{r=1}^{s} u_r y_{r0}}{\sum_{i=1}^{m} v_i x_{i0}}$$

This method should be used for other units as well in this way:

Zero unit efficiency $MaxZ_0 =$

st $\leq$ \: Efficiency of all units

The variables of above problem are weights and the answer to the problem provides the most appropriate and favorable values for the zero unit weights and measures its efficiency.
Its mathematical model is as follows:

$$MaxZ_0 = \frac{\sum_{r=1}^{s} u_r y_{r0}}{\sum_{i=1}^{m} v_i x_{i0}}$$

st:

$$\frac{\sum_{i=1}^{s} u_r y_{rj}}{\sum_{i=1}^{m} v_i x_{ij}} \qquad (j = 0,1,2,\ldots, n)$$

$$u_r, v_i \geq 0$$

For each unit:

Size: The size of the company, which is the logarithm of the total assets of the company at the end of each year.

MarketShare: Company's market share in year t, which is the ratio of company sales to industry sales

Free Cash Flow: If the company has a positive operating cash flow, it is given a score of one, otherwise, it is given a number of zero.

Age : The age of company listed on the stock exchange, which is the natural logarithm of the years in which the company has been listed on the stock exchange.

Foreign Currency Indicator: is a dummy variable and if the company has exports, it gets score 1, otherwise, it gets score zero.

ε: The percentage of error that can be attributed to the management ability.

In this study, control variables are:

(ΔCASHit): the ratio of change in cash divided by the market value of equity;

(ΔEarningit): is the ratio of change in net earnings divided by the market value of the equity of company i in year t;

(ΔNetAssetit): the ratio of the change in net assets divided by the market value of the equity of company I in year t;

(ΔInterestExpenseit): the ratio of changes in interest expenses divided by the market value of the equity of the company i in year t;

(ΔDivindedndsit): the ratio of the change in the net earnings divided by the market value of the equity of company i in year t; and

Leverage ratio: is the amount of total liabilities to total assets of the company i in year t.

Results

Table (1) presents the central indices such as mean and scatter indices such as standard deviation, kurtosis and skewness for different variables.

Table 1: Descriptive statistics for research variables

Variable name	abbreviation	n	mean	SD	variance	skewness	kurtosis
The cash final value	EXRET	660	-.27366	17.652845	311.623	-7.546	213.664
Management ability	ABILITY	660	.12040	.273216	.075	12.612	174.689
Change in net earnings	ΔEarningit	660	.05519	.448611	.201	8.637	146.384
Change in net asset value	ΔNetAssetit	660	.37046	2.360212	5.571	12.454	208.604
Change in interest expenses	ΔInterestExpense$_{it}$	660	-.00202	.632588	.400	-9.166	173.980
Change in the dividend	ΔDivindedndsit	660	-.00074	.353181	.125	.061	2.286
Leverage ratio	Leverageit	660	.60899	.187065	.035	.081	.078

As seen in Table (1), the standard deviation of the variables is not zero and they fulfill this condition. Also, in the statistical population, the maximum and minimum values of this parameter are 17.652845 (the cash final value) and .187065 (leverage ratio), respectively.

Table 2: Matrix of correlation coefficient of regression model variables

variables	EXRET	ABILITY	ΔEarning	ΔNetAsset	ΔInterestExpense	ΔDivindedn ds	Leverage
EXRET	1	-.006	-.030	-.010	.011	-.032	-.147-**
ABILITY		1	.022	.013	.010	-.046	-.009
ΔEarningit			1	.630**	-.009	-.019	.010
ΔNetAsset				1	-.005	.051	-.014
ΔInterestExpense					1	-.013	-.019
ΔDivindednds						1	-.016
Leverage							1

Table 3: Test to determine the method of using panel data for research models

Test type	Cross-sectional Fisher statistics (Chi-square(	Significance level	Model used
F-Limer	1.183800	0.1027	Common effects (panel data)

As seen in the table, the results of the F-Limer test show that the probability obtained for the F statistic is more than 5%, so the research model has common effects (panel data).
The results of regression analysis of the research model to examine the hypothesis of its research are presented in Table (4).
Table 4: Results of research model estimation

Parameters	Value of coefficients	T value	Probability value	Result	VIF
B	0.520224	3.704230	0.0002	Significant and positive	-
ABILITY	2.244536	1.983133	0.0478	Significant and positive	1.003
D_{1*} ABILITY	2.083560	3.779366	0,0006	Significant and positive	1.666
ΔEarningit	0.040667	0.361355	0.7180	Non-significant	1.670
ΔNetAssetit	-0.008989	-0.420779	0.6741	Non-significant	1.001
$\Delta InterestExpense_{it}$	0.043640	0.706854	0.4799	Non-significant	1.010
ΔDivindedndsit	-0.002239	-0.020139	0.9839	Non-significant	1.001
Leverageit	-1.359502	-6.513443	0.0000	Significant and negative	1.012
F value		6.772739	F probability value		0.000000
Coefficients of determination		0,624834	Durbin-Watson		1.781156

VIF values (variance inflation factor) are an indices for examining the collinearity between independent variables. If its value is higher than 10, there will be a possibility of collinearity between the independent variables. The value of this index for variables is less than 1.670. The value of t-statistic for ABILITY is 1.983133 and is significant and positive at 95% confidence level. The value of t-statistic for D1 * ABILITY is 3.779366 and is significant and positive at confidence level of 0.95. The value of t-statistic for ΔEarningit is 0.361355 and is non-significant at 95% confidence level. The value of t-statistic for ΔNetAssetit with -0.420779 and is non-significant at 95% confidence level. The value of t-statistic for ΔInterestExpenseit is 0.706854 and non-significant at 95% confidence level. The value of t-statistic for ΔDivindedndsit is -0.020139 and non-significant at 95% confidence level. The value of t-statistic for Leverageit with -6.513443 is significant and negative at 95% confidence level. The

value of t-statistic for the intercept is 3.704230 and in the area of non-rejection of the null hypothesis at 95% confidence level. It means that intercept is significant, so the fitted model for this study is as follows:

$EXRET_{it}=0.520224+2.244536\ ABILITY_{it}+2.083560696D1^{*}\ ABILITY_{it}-1.359502\ Leverageit+\varepsilon_{it}$

According to "Durbin-Watson" statistic of the first model shown in Table (4), the value of this statistic is 1.781156, which is between 1.5 and 2.5. Therefore, it can be stated that there is auto-correlation between observations in the model. The t-statistic for the explanatory variable of ABILITY (with beta of 2.244536) is 1.983133 and the significance level of this variable is 0.0478, which is statistically significant and positive at the 95% confidence level (Table 4). Therefore, the first hypothesis of the research that there is a significant relationship between management ability and the cash final value is confirmed. The t-statistic for the explanatory variable of D1 * ABILITY (with beta 2.083560) is to 3.779366 and the significance level of the mentioned variable is 0.0006, which is statistically significant and positive at the 95% confidence level (Table 4). Therefore, the second hypothesis of the research that states in companies with higher management ability, the cash final value is higher is confirmed.

Conclusion

The present study aimed to investigate the relationship between management ability and the cash final value in companies listed on the Tehran Stock Exchange. The present study was conducted based on the theory and research presented by Jean and Park (2017). The results of the statistical test of research hypotheses indicate the confirmation of research hypotheses. According to the research results, there is a significant relationship between management ability and real earnings management. This means that the final value of one Rial of cash earned by companies increases in line with the increase in management ability. This issue can be justified based on the balance and agency theories. Finally, the results revealed that the final value of cash changes and improves over time and the management ability improves. In companies with higher management ability, the cash final value is higher and the level of this impact per unit is 2.083560 units.

The root of non-consistency between the effectiveness of the first hypothesis and the second hypothesis of this research with Jean and Park's research (2017) can be attributed to statistical populations of these two studies. Due to the similarity of the test model in both studies, Jean and Park (2017) used the information of American companies listed in the US stock market to collect the data needed for their research. However, the data required for this study were selected from the population of companies listed on the Tehran Stock Exchange. Therefore, the only fundamental difference in these two studies is due to their statistical populations. The first hypothesis shows that there is a significant relationship between management ability and the cash final value. Managers as regulators of corporate liquidity policies should note that having high liquidity in the company reduces the cash final value, and this is especially true for the inflationary conditions in Iran.

Thus, managers are recommended to pay attention to the issue of low cash return and devaluation of the final cash over time when formulating the company's liquidity policies. It should be also noted that just having high liquidity does not mean a good company. Also, according to the research results, having surplus liquidity has reduced the return of

shareholders. Thus, investors and analysts are recommended to pay attention to the cash final value as one of the important and effective components in the future status of the company in their investment decisions. The results of testing the second hypothesis show that the manager's abilities can increase the cash final value. Based on the Hambrick and Mason (1984) theory, the outputs of the organization as well as strategic choices and levels of performance are greatly influenced by the managerial characteristics, which is in line with the conducted research. Thus, investors and creditors in the Tehran Stock Exchange are recommended to consider this impact in their analysis and decisions, and to consider the ability of companies to use resources. Shareholders of companies listed on the stock exchange are also recommended to review the background of managers in terms of the ability to use the resources of companies according to the model presented in this study when selecting board members.

References

Ahmadpour, A., Malekian, A., Bahman Miri, M., and Nadi, Z. (2012). Investigating the effect of board structure on the intellectual capital of companies with a fuzzy approach, a case study of pharmaceutical companies on the Tehran Stock Exchange. Accounting knowledge. Issue 8. Spring 2012. Pages 73-94.

Hasas Yegane, Y., and Baghomian, R. (2006). The role of the board of directors in corporate governance (Part II). Accountant Monthly, Issue 21, Volume 174, pp. 33-65.

Hasas Yegane, Y, Sheri, S and Khosrownejad, SH (2008), "Relationship between corporate governance mechanisms, debt ratio and company size and earnings management", Accounting Studies, Issue 24, 79-115

Rezazadeh, J and Zarei Moravaj, K (2009), "Factors Affecting the Change of Auditors in Iranian Companies", Quarterly Journal of Accounting Studies, Issue 20, 89-105

Abbaszadeh, MR and Manzarzadeh, H (2011), "Study of the possibility of issuing an acceptable report of independent auditors using the characteristics of the board of directors of companies listed on the Tehran Stock Exchange", Accounting and Auditing Reviews, Issue 63, 95-112

Kashanipour, M; Rahmani,A, and Parchini Parchin, SM (2009), "The relationship between discretionary disclosure and non-executive managers", Accounting and Auditing Reviews, Issue 57, 85-100

Francis, J. R. and J. Krishnan,(1999), "Accounting Accruals and Auditor Reporting Conservatism. ", Contemporary Accounting Research, Vol. 16, No. 1, 135-166.

Lin, Z. J. and L. Ming,(2009), "The Impact of Corporate Governance on Auditor Choice: Evidence China. ", Journal of International Accounting, Auditing and Taxation, Vol. 18, 44-59.

Lev, B., C. Petrovits, & S. Radhakrishnan. (2010). Is doing good good for you? How corporate charitable contributions enhance revenue growth. Strategic Management Journal, 31(2), 182–200.