

Analytical Study of the Effect of Dividend Policy and Financing Policy on Market Value-Added in Tehran Stock Exchange

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Abstract: A corporate's value depends drastically on the maximizing the profit and the method of profit distribution as well as taking the proper approaches for financing. Distinguishing the policy of tension and traction dividend considering the investment opportunities and investment in suitable investing opportunities that needs traction policy of dividend, as well as the stockholders' satisfaction which takes the enforcement of tension policy of dividend in order to increase the Business Value-Added (BVA) is almost difficult and very sensitive. Moreover, it is more difficult to study and distinguish suitable approaches for consuming financing resources. We also should consider the way of distributing these resources as the dividend or consumption of these resources in using the profitable investment opportunities. This can be effective on fulfillment of increasing the efficiency of investment of investors and maximizing the stockholders' Wealth. Economic Value Added (EVA) can be used as an interior standard for the business operation. This standard result to creation of another external standard named Market Value Added (MVA). The firm's value can be evaluated through this MVA which is used in this study. Generally, detecting ways of financing (borrowings) and the way of cash distribution (dividend divided) and their affects ratio on maximization of a corporate value are among the complicated problems and subjects that studying and researching them would be very important for the analysts, investors, stock assessors, stock brokers, financial and credit institutions and other beneficial individuals and institutions. Therefore, according to this importance this article will study these variables and their relationship with the Market Value Added of the registered companies with Tehran Stock Exchange. The results of the tests show that in the companies with less opportunity and the big companies the Market Value Added is under the effect of financing policy and dividend policy, and there is a significant relationship between them.

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1. Introduction

Capital structure and dividend policy play very important role in maximizing the shareholders' wealth and the company's value. The aim of determining the capital structure is to determine the financial resources mix in order to maximize wealth of shareholders. Optimal capital structure is the one which maximizes the corporate value. From the financial and capital structure point of view, because the capital cost is lower than debt cost (which is formed from Interest Expense Deductibility) makes the management to choose their financing with especial look at debt and to increase financial leverage of the company (Koch and Shenoy,1999). Therefore, financing decisions of financial managers and investors should lead to the maximization of the shareholders' wealth. Profitability is also the basic standard for performance measurement and the principal for the company's stock valuation that can help to the maximization of the shareholders wealth which leads to maximizing the firm's value as well. The dividend policy has a direct effect on the

shareholders expectation, available cash resources, way of financing, financial structure, and the consistency of the business entity. On the other hand, market value added is one of the most famous and suitable methods of testing the business performance which determines a value that is very close to market value added. Overall, familiarity with methods of dividend financing as well as awareness of the effects of these policies on the market value are very important and have been discussed in this research.

2. Stating problem

Aim of investment is to get profit and increase wealth. Maximizing the interest, way of financing and cash distribution are among the subjects the business management should study and consider as their most important duties. If a business entity has been unsuccessful in financing and programming of cash, insolvent and unable to distribute the dividend on time, then the firm's value significantly depends on its ability in low-cost financing and way of using it. Therefore, certainly,

the company would not be able to reach its aims and its life may not be certain. In the Free Cash Flow (FCF) theory it has been stated that the companies with partly high investment opportunities use their free resources in these kinds of opportunities in order to maximize the firm's value (Jaggi and Gul, 1999). This would result to maximization of the shareholders' wealth. It is believed that the company's policy in paying the dividend from the low-cost interior financing resource also can affect the company's value. Moreover, the consumption of these resources in using profitable investment opportunities will cause to deduction in paying the dividend (Jensen Theory 1986). Results of previous researches show that ways of financing resources, investment opportunities, and dividend policy are among the considerable information tools for the managers and investors with especial importance for maximizing the shareholders wealth, raising the motivation, and creating appropriate investment opportunities for the investors. It is important to recognize the expansion and contraction policies of dividend (Variable Dividend) as well as the subject of determining the financing resource (Debt Ratio) in order to distribute the dividend to the managers, shareholders, investors of the big companies and the companies with profitable investment opportunities (Gul and Kealy, 1999). The current research studies the relations between these two important variables i.e. financing and dividend policies along with the market value added of the accepted companies in Tehran Stock Exchange.

3. Literature Review

Graham Paul Barman has a research entitled 'An Evaluation of How Dividend Policies Impact on the Share Value of Selected Companies' for 42 south African countries for a period of 10 years. The decisions in this study were divided into three groups as follows: investment decisions, financing decisions and dividend decisions. Investment decisions determine kind and value of the used assets by the company. Financing decisions determine the company's capital structure and the necessary financing resources for the investment. Dividend decisions determine the distribution amount and procedure of cash dividends between the shareholders. The researcher found that the dividend's impact on a company's stock's current value is not only important for the management policy but also is important for planning and recognizing the investment market by the investors and economists. Therefore, the tests' results show that the dividend policy has a significant impact on the firm's value and the stock's value. In the year 2001, Vidhan k.Goyal, Kenneth Lehn, Stanko Racic

studied the relationship between the development opportunities and financing policies for 61 companies. The researchers, from the results of their research, mention that the changes in the level of the companies' debt are affected in the investment opportunity which there is an inverse relationship between these two variables. Hence, if there are high development opportunities, the level of debts will be low. On the contrary, if a corporate's debt increases the development opportunities will be low. Finally, they state that the issued debt maturity in the periods with low development opportunities is longer than the debt maturity in the period with high development opportunities.

4. Definition of operational variables

Market Value Added: this variable will be calculated according to the following relationship (Thenmozhi, 2000):

$$MVA = V - K$$

MVA is market value added, V is the market value of the firm, including the value of the firm's equity and debt, K is the capital invested in the firm. The invested capital is equivalent to shareholders' equity plus Long-term debt and Market Value defined by Market Price per Share multiply Number of Shares.

Debt ratio: in this research the financing policy is on the basis of external financing resource i.e. the debt ratio is defined that is measured according to the short-term and long-term liabilities. Investment opportunities: there is no consensus about investment opportunities' measurement and definition as well as providing a computational icon. According to research done abroad and the definition provided by Jaggi and Gul (1999), the following three criteria are used to calculate the investment opportunities. Note that market value of assets is derived from the total book value of assets and market value of shares.

$MBVA^1 = \text{market value of assets} \div \text{book value of assets}$.

$MBVE^2 = \text{market value of assets} \div \text{book value of shares}$.

$EP^3 = \text{earnings per share} \div \text{price per shares}$.

Dividend changes: it means the difference between the cash dividends per share of the current year and the previous year that is divided on price per share at the beginning of the financial year.

Dividend changes: by dividing the difference of cash dividends per share of the current year and cash dividend per share of the previous year

¹ - Market to Book Value of Asset

² - Market to Book Value of- Equity

³ - Earning / Price Ratio

by price per share at the beginning of the financial year so result is dividend changed. Firm size is measured based on the total assets it owns.

5. Research Hypothesis

- 1- In the firms with low development opportunities, there is a significant relationship between the dividend changes, the debt ratio and the firm value.
- 2- In the firms with high development opportunities, there is a significant relationship between dividend changes, debt ratio and the firm value.
- 3- In the big firms, there is a significant relationship between dividend changes, debt ratio and the firm value.
- 4- In the small firms, there is a significant relationship between dividend changes, debt ratio and the firm value.

6. Population and Sampling

The member companies of Tehran Stock Exchange that have retained their membership in the Stock Exchange during the considered period (i.e. from the begging of 2002 to the end of 2009) constitute the research community. The sampling is also done by omission Statistical method. The companies have been selected as sample that in the considered period of study have presented their financial statement to the Stock Exchange and their financial statements have been approved by the Iran Auditing Organization. Moreover, the disclosure of information along with the descriptive notes should be available and complete.

7. Methods of Statistical Analysis

This is an applied, descriptive and post-events research. To test the relationship between the variables of the research theories, the multiply linear regression has been used. Fisher's statistic (F) has been used for significance of the regression model (F) at 95% confidence level. The tested companies in the first and the second hypothesis are selected and classified based on the investment opportunities using multivariate statistical method of principal component and correlation matrix. In the third and the fourth hypothesis are selected and classified according to the size of the companies using the logarithmic method based on the median.

8. Hypotheses' Results

In testing the first and the second hypotheses using three defined ratios (EP, MBVE, and MBVA) as well as using Correlation Matrix and Eigen value have been calculated as a mutual standard for the investment opportunities. The values obtained from

the Correlation Matrix according to the principal components are presented in Table 1 and 2. The first component which has the highest value is selected as the mutual factor. The reason for selecting the basic component is that shows the most distribution or the proportion of variance of the population.

Table 1: basic components extracted for the investment opportunities

component	Especial amount		
	Total	Variance percentage	Cumulative variance percentage
First	1.418	47.279	47.279
Second	.998	33.264	80.544
Third	.584	19.456	100.00

Table 2: Coefficients of the basic components extracted

Ratio	MBVA	MBVE	EP
Principal Component	.835	.841	-.116

Based on the above results, the investment opportunities' Equation is obtained by using Coefficients of the first component as follows:

$$IOS = .835MBVA + .841MBVE - .116EP$$

The above linear equation's result is represented as a factor in the investment opportunities of the sample companies. After a calculating the mutual factor for all the companies, the descriptive statistics for the mutual factor IOS is calculated which is presented in table3.

Table 3: descriptive statistics for the mutual factor IOS and logarithm of assets (N=101)

Factor	Mean	standard deviation	Median
IOS	.0662	1.1547	-.2504
Log Asset	6.013	.671	5.8557

Using the median indicator, the corporate based on the investment opportunities factor are divided into two groups: a) corporate with low investment opportunities (as a sample for the first hypothesis), b) corporate with high investment opportunities (as a sample for the second hypothesis). In the third and the fourth hypotheses the corporate based on the logarithm of assets are divided into two groups of small corporate and big corporate. The median is used for the corporate segmentation. The companies higher than the median are considered as the big companies (as a sample for the third hypothesis) and the companies lower than the median are considered as the small companies (as a sample for the fourth hypothesis). The descriptive statistic is given in the table 3.

According to the test between the Dividend Policy, Debt Rate and the Market Value-Added in the low-growing companies, the Multiple Correlation is .878 and Corrected Coefficient of Determination is .761 I.e. almost %76 of Market Value-Added is presented by the dividend variable and debt rate variable. The regression equation has a significant positive slope and both coefficients are on the %5 Error level note be zero. According to standardized coefficient and as the debt rate's coefficient is higher, in this model, the debt rate comparing with the dividend policy is more important in order to test the Market Value-Added (table 4).

Table4: Multiple linear regression of the first hypothesis

Model	Unstandardized Coefficients		standardized coefficients	T	Sig.
	B	Std.Error	Beta		
(Constant)	0.634	0.064		9.94	.000
MTD	0.538	0.043	0.886	12.56	.000
DIV	0.000	0.000	0.156	2.21	.032
a. Dependent Variable: MEVM b. IOS=IOSSMALL		R = 0.878 Adjusted R Square = 0.761			

In the second hypothesis in the companies with high investment opportunities, the results show that multiple correlation coefficients are 0.854 and the adjusted coefficient of determination is 0.726. According to Regression coefficients, level of statistical significance t and Zero coefficient both the variables on the %1 error level is rejected (table 5).

Table 5: Multiple linear regression of the second hypothesis

Model	Unstandardized Coefficients		standardized coefficients	T	Sig.
	B	Std.Error	Beta		
(Constant)	1.209	.132		9.16	.000
MTD	.696	.096	.595	7.21	.000
DIV	.000	.000	.415	5.03	.000
a. Dependent Variable: MEVM b. IOS= IOSlarge		R = 0.854 Adjusted R Square = 0.718			

The results of Multiple regression model from the third hypothesis show that The multiple correlation coefficient is 0.637 and the Adjusted coefficient of determination is 0.406. Moreover, according to the level of statistical significance t in the big companies there is a significant relationship between dividend policy and Market Value. Nevertheless, there is no significant relationship between the debt rate and the Market Value (table 6).

Table 6: Multiple linear regression of the third hypothesis

Model	Unstandardized Coefficients		standardized coefficients	T	Sig.
	B	Std.Error	Beta		
(Constant)	.976	.184		5.30	.000
MTD	.086	.250	.039	.34	.731
DIV	.000	.000	.640	5.65	.000
a. Dependent Variable :MEVM b.size=large		R=.637 Adjusted R Square =.406			

The results from the fourth hypothesis show that the multiple correlation coefficients are 0.884 and the adjusted coefficient of determination is 0.773. Zero variable coefficients show that in the small companies, on the %1 error level, there is a significant relationship between the debt rate, dividend policy and company value. Furthermore, the company's value is affected by the both variables.

Table 7: Multiple linear regression of the fourth hypothesis

Model	Unstandardized Coefficients		standardized coefficients	T	Sig.
	B	Std.Error	Beta		
(Constant)	.919	.123		7.50	.000
MTD	.527	.072	.532	7.36	.000
DIV	.001	.000	.540	7.46	.000
a. Dependent Variable: MEVM b. Size=small		R = .884 Adjusted R Square =.773			

8. Discussions

According to the theory of free cash flows in firms with low investment opportunities, it is expected to have free cash flows. Because, these companies don't have opportunities for investing surplus cash or they have little cash and the cash they have kept in higher levels. From other hand, the trusters and the investor are interested to invest in companies which have high free cash flow. It is also expected the companies with high free cash have high debt too. The shareholders expect that such companies distribute more shares. Therefore, in companies with low investment opportunities due to lack or shortage of profitable opportunities and also to prevent the stylistic management of cash as well as the retaining the firm's value, distributing the debts and dividend, are the best ways capable of increasing the market value added of the companies. On the contrary, in companies with high investment opportunities, the management tries by selecting and investment in opportunities with net positive present value, to maximize the firm's value. Hence, in companies which have specific free cash consumptions and it is expected that this cash to be spent as the internal financing resources which are less costing than the external financing resources to be invested on the profitable opportunities. Therefore, in such companies are less affected by the

debt ratio and the dividend policy. In the big companies the company's value is also affected by the dividend variable but there is no significant relationship between the debt rate and the company's value. Moreover, in the small companies because of their low flexibility in financing both the dividend and the financing affect on the Market Value Added. Generally, the results from this research are the same as the results from the research has done by Flex and Joan in 2008.

This research is done without considering the mutual effects of debt ratio and the dividend policy on the value added. Future researches could be done with considering the effects of debt ratio and the dividend policy on each other and the also their relationship with market value added.

- It is recommended to investigate the effect of capital structure on the market value added of the companies for the future researches.

- It is recommended to study the same topic but on the specific industries.

- It is recommended to study a subject with a title like 'market value added and the stock price behavior'

-It is recommended the relationship between the free cash flows, investment opportunities and financing policy to be studied.

- It is recommended to study the impact of increase of dividend from the free cash resource on the capital structure.

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