



The Investigate of the Relation in the Free Cash Flow Valuation and Stock Returns and Annual Adjustment between Growth Opportunities

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Abstract: The free cash flow is a criterion for measurement of firm performance and shows cash that company possesses after performing the necessary expenses for the maintenance or development of assets. Free cash flow is important from this aspect which allows the company to seek opportunities and increase shareholder value. Without having the cash, Development of new products, doing commercial Acquisition, paying Cash benefits to shareholders and debts relief is not possible. Given the importance of this issue, has been attempted in this research, we investigate the relation between growth opportunities in the free cash flow valuation and stock returns and annual adjustment. 120 companies among the listed companies in Tehran Stock Exchange were studied in a 5-year period from 1387 to 1391. This research in terms of purpose is a part of applied research and was evaluated to correlation method. The results of this study show that there is a significant and positive relation between growth opportunities and free cash flow. Also, there is a positive and significant relation between growth opportunities and stock returns and finally, there is a positive and significant relation between growth opportunities and annual adjustment.

Keywords: Growth Opportunities, Free Cash Flow, Stock Returns, Annual Adjustment

INTRODUCTION

Development corporations during the time results in creation and increase stratum of the capital owners that had no direct involvement in corporate governance and through the election of Board Of Director, conducted and monitored the companies' affairs. This new evolution, created the new groups of professional managers that in the capital of Institutions which administered, had no any share or had little share and therefore institute management was separated from the capital Ownership¹. Separation of management from ownership was caused conflict of interest between managers and stockholders and the emergence of the problem of agency theory. The agency theory that separates ownership and control in the companies from each other causes the Conflict Of Interest between stockholders and firm's managers. One of the cleanest forms of fundamental analysis of securities is Evaluation of Cash flows entities; because this method, establishes a direct relation between firm value and economic return from its assets. Free cash flow, is a Criteria for Measuring Corporate Performance And it shows cash that company possesses after

performing the necessary Expenditures for the maintenance or development of assets. Free cash flow is important from this aspect that allows the company to seek opportunities and Increase shareholder value. Without having the cash, Development of new products, doing commercial Acquisition, paying Cash benefits to shareholders and debts relief is not possible. On the other hand, Cash should be kept at a level that counterbalance between the cost of cash maintaining and Insufficient cash cost. On the other hand, the investment approaches have a lot of diversity. Regardless of the type and investment method, two factors "Investors' expectations about the benefits of renewable investment "and" Real benefits from investments" are the most important aspects of financial decision making. In any type of investment Investor looking for return on investment. Investor tries to get information of the amount of future returns shares of companies. On the other hand, one of the most common methods of analyzing financial information, is preparation of financial ratios. Financial ratios are actually abstract of the financial reports of companies that represent lots of the information content from internal state of the company. Also it should be noted the increase of free cash flows and followed by it agency problems caused by free cash flows also will effect on the route of future decision makings ². Annual adjustments are the items relating to prior years that are considered in the Adjustment of beginning of period accumulated residual income (loss) and are limited to items that result from the change in accounting policy and correction of mistakes. This figure is brought as a reducing or increasing number at the beginning of the accumulated residual income and loss Statement that is one of the basic financial statements. According to the given description, it should be noted necessity to investigate the relation of growth opportunities in the valuation of free cash flow and stock returns and annual adjustments for the companies listed on the Stock, Seemed necessary.

Theoretical bases and research background

Growth Opportunities

Purpose of growth opportunities, is ratio of market value to book value of equity. Growth opportunities have been classified in various formats. In section of the growth opportunities and capital structure, debt of company, assuming the availability of growth opportunities, can play a two-way role in the firm value that this role can be explained by four dimensions of underinvestment theory, overinvestment theory, Pecking Order Theory, Trade-off Theory. Underinvestment theory emphasizes that high debt has a negative effect on firm value and causes managers tend to investment profitable projects ³. Overinvestment theory emphasizes negative results of high level of cash flow under control of two directors. In this case it is better the company finances through the debt until limit of accessing to cash flow form for managers. In this case, there is a positive relation between debt and firm value (Jensen, 1996). Based on Pecking Order Theory, Companies in their needed financing pass a hierarchy. In other words, managers prefer Financing from Internal Sources of

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company to external sources of company. Based on this theory, there is a direct relation between growth opportunities and debt ratio of firms⁴. Also in Trade-off Theory can achieve to optimal financial leverage through a balance between the interests of finance by debt and cost of debt that maximize the firm value. Based on this theory, there is an inverse relation between growth opportunities and debt ratio of firm⁵. To measure the variable of growth opportunities is used of ratio of market value to book value of equity.

Growth opportunities = the number of released stocks* Stock market prices/ the sum of shareholders' equity in the Balance Sheet.

Free cash flow

The mentioned criterion is one of the standards that used to compare and analyze the financial health of companies. So far no single definition has been represented of free cash flow, but the various definitions has been explained by different people to calculate the free cash flows.

Copeland expresses the free cash flow of the Entity is Operating Profit after tax deficit to non-cash surcharge after investment deficit. Paul, David and Yuan also have defined it Residual funds on need to invest in projects with positive net Present Value that have not been paid to shareholders⁶.

In this theory, free cash flow is residual cash flow after deducting the required cash to invest in projects that their present value was assesses positive. Based on Jensen's definition, free cash flow is determined by the following equation:

$$FCF = CFO - investment^+$$

That FCF is free cash flows of the Entity in the t period, CFO is Cash from operation of the Entity in the t period, and investment⁺ is required free cash flow for investment in projects with a positive NPV of expected Entity in the t period.

Stock returns

To calculate portfolio returns, first, expected returns of its components must be determined. Benefits of ownership may be paid to shareholders to various forms that the most significant of them are Capital increase from reserves (Bonus Shares) and Capital increase from receivables and contribution in cashes. For these cases, rate of return calculation will be as follows:

$$r_{it} = \frac{p_t(1 + \alpha + \beta) - (p_{t-1} + c\alpha) + D}{p_{t-1} + c\alpha}$$

In which Pt and Pt-1 are share price at the end and beginning of t period, α is percent of capital increase from receivables and contribution in cashes, β is percent of capital increase from reserves, c is underwriting price of new share and D is Stock Dividends during t period.

Annual adjustment

Annual adjustments are retained earnings adjustments in the beginning of period and re-presentation of comparable items of corporate financial statements that result from the change in accounting policy and correction of mistakes. This figure is brought as a figure of reducing or increasing at the beginning of retained earnings and Deficit and after the retained earnings and Deficit in the beginning of period. In this study to measure these variables is used of its natural logarithm of the absolute value. The absolute value of presented revised figure is divided in the company's retained earnings and Deficit to retained earnings at the end of period⁷.

History of research

Di Giuli⁸ has examined the incorrect assessment effect of the stock price and Investment opportunities on payment methods in the business combination. He concluded with studying 1187 business combination between 1990 and 2005 among America trading companies, that decisions relating to payment method in short-term lead to incorrect pricing of corporate stock. However, managers believe in quality and way of merger and also company's stock value after merger in long-term. He also concluded that better investment opportunities lead to more extensive use of stock.

Fresard and Salva⁹ Defined extra cashes as extra cashes that are more than Operations need or investment and cashes that are higher than Predictive amount in the optimal level. Also they explain in their research that to achieve the optimum level, the required amount of cashes, Growth opportunities and financing constraints will be determinant.

Yahya zade far et al., examined "the effect of growth opportunities in free cash flow valuation" in a research. This study has used book Value Of the equity, Net Profit and Stock Dividends as Control variables. The results of study imply the free cash flow positive and significant relation of stock returns despite the growth opportunities. On this basis the present result in Iran capital market can be effective in decision making of managers and investors to achieve the proper return of the company, and shareholders control measures such as attending to overinvestment theory and Kuru theory also can be effective in this case¹⁰.

MATEREAL AND METHOD

Research Method

This research is among applied researches in terms of target. It will be used of descriptive statistics methods including means, Variance, Standard Deviation and quarters to explain the variables. In addition F and T tests, Regression also is used to Hypotheses Testing, indeed Regression presumption testing such as normality of the data and the lack of correlation of variables etc also will be used.

Research hypotheses

- Growth opportunities have significant relation with stock free cash flow.
- Growth opportunities have significant relation with stock returns.

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- Growth opportunities have significant relation with annual adjustment.

RESULTS

The experimental results

First theory: Growth opportunities have significant relation with stock free cash flow.

After determining the appropriate method to estimate the parameters, the results of the corporate model estimation was examined. The investigation of the first theory results shows that fitted model coefficient of determination is equal to 82.5 percent that is the variable of growth opportunities can specify 82.5 percent of free cash flow changes of firms' stocks.

The results of fitted significant regression models show that significance level of the F-statistics (17.07) is Less than 5% and significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant relation with stock free cash flow.

Table 1. The results of the first research hypothesis testing (The dependent variable, stock free cash flow)

Variable	Regression coefficient	Standard error	t-statistics	Significance level
intercept	-0.220608	0.004259	-51.79472	0.0000
Growth opportunity	0.252788	0.046316	5.457941	0.0000
Determination coefficient	0.825	F-statistics		17.07 (0.000)
Adjusted determination coefficient	0.776	Durbin-Watson		1.553

On the other hand, the regression coefficient of variable growth opportunities (0.253) showed that in the significance level of 5% has a positive and significant effect on the free cash flow of firms' stocks. These results mean that if corporate growth opportunities increase 1 unit, free cash flow of firms' stocks will increase 0.253 units significantly.

Second theory: Growth opportunities have significant relation with stock returns.

Table 2. The results of the second research hypothesis testing (The dependent variable, stock returns)

Variable	Regression coefficient	Standard error	t-statistics	Significance level
intercept	0.256713	0.027479	9.342081	0.0000
Growth opportunity	0.453059	0.170469	2.657721	0.0081
Determination coefficient	%12	F-statistics		7.071(0.008)
Adjusted determination	%1	Durbin-Watson		2.21

coefficient			
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As it is observed, the results of the second research hypothesis are presented in Table 4-7. The investigation of fitted model coefficient of determination shows that corporate growth opportunities has explained 1.2% of dependent variable changes that is stock returns and other changes are under factors of outside the model.

Also the examination of fitted significant regression models shows that amount of the F-statistics (7.071) at the significance level of 5% is Less than 5% and significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant relation with stock returns. On the other hand, the results of the regression coefficient of variable growth opportunities (453/0) showed at the 5% error level has positive and significant effect on the corporate stock returns, That is corporate stock returns increases effect of growth opportunities.

Third theory: Growth opportunities have significant relation with annual adjustment.

The investigation of determination coefficient of the third theory of the research shows growth opportunities for companies could explain 1.5% of corporate annual adjustment changes.

On the other hand, the results of fitted significant regression models show that given that significance level of the F-statistics (8.175) is Less than 5% and significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant effect on the corporate annual adjustment.

Table 3. The results of the third research hypothesis testing (The dependent variable, annual adjustment)

Variable	Regression coefficient	Standard error	t-statistics	Significance level
intercept	0.079848	0.004941	16.16006	0.0000
Growth opportunity	0.093336	0.032041	2.912988	0.0037
Determination coefficient	%15	F-statistics		8.175(0.004)
Adjusted determination coefficient	%13	Durbin-Watson		1.624

Also, the regression coefficient of variable growth opportunities (0.093) showed that at the error level of 5% has a positive and significant effect on the corporate annual adjustment. That is whatever growth opportunities for companies to increase corporate annual adjustment also increases, so that if corporate growth opportunities increase 1 unit, corporate annual adjustment will increase 0.93 units significantly.

CONCLUSION

From the company which has low investment opportunities, is expected that has High free cash flows, because Whatever investment opportunities (actual and potential) increases, most of the excess funds to increase shareholder wealth by investing have been used in the existing opportunities and an increase in the rate of investment of surplus funds will lead to reducing of these cashes. The purpose of the present study is the investigation of growth Opportunities relation in valuing the free cash flow and stock returns and annual adjustment in the companies listed on the Stock Exchange. According to the summary of the above results, the results of hypothesis are stated as follows.

First theory: growth Opportunities has significant effect on the free cash flow of stock

The results of fitted significant regression models show that significance level of the F-statistics (17.07) is Less than 5% and significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant effect on the free cash flow of stock and in the significance level of 5% has a positive and significant effect on the free cash flow of firms' stocks. These results mean that if corporates growth opportunities increase 1 unit, free cash flow of firms' stocks will increase 0.253 units significantly. Purpose of growth opportunities is Ratio of market value to Book Value of the equity. On the other hand, free cash flow is a Criteria that measures profitability of the company after all expenses and investments. Based on the result of this theory it can be inferred that according to the concept of Investment Opportunities, companies with the balance between benefits funding by debt and cost of debt, achieve to the optimal financial leverage that can maximize the firm value. In these circumstances with increasing value of the companies, free cash flow rises and attractiveness is created by increasing the value of the firm and companies can use of this advantage to attract new investors and keep their shareholders. The result of this hypothesis with research of Fresard and Salva⁹ that explain that to achieve the optimum level, the amount of required cashes, Growth opportunities and financing constraints, will be decisive, correspond in terms of significant correlation. Also in another study, correspond with Yahya zade far ET al¹⁰. express that there is a positive and significant relation between free cash flow and stock returns despite the growth opportunities.

Second theory: growth Opportunities has significant effect on the stock returns

Based on fitted significant regression models show that amount of the F-statistics (7.071) at the significance level of 5% is Less than 5% and significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant effect on the firm's stock returns. On the other hand, the results of the regression coefficient of variable growth opportunities (0.453) showed have a

positive and significant effect on firm's stock returns at the 5% error level, it means the firm's stock returns increases by effect of growth opportunities. According to the given explanations about the growth opportunities, it can be said about stock returns, efficiency evaluation, is only logical method that investors are able to do to compare alternative and different investments. In analysis of this hypothesis should be stated companies with a balance between the benefits financing by debt and cost of debt to achieve optimal financial leverage that can maximize value of the company and based on theoretical basis should increase stock returns. The result of this hypothesis verifies the theoretical basis and in fact, companies can increase terms of increasing stock returns with creating growth opportunities.

Because for calculating portfolio returns, first it must be determined expected returns of its components, Benefits of ownership may be paid to shareholders in various forms that most important of them are capital increase from the reserves (equity awards) and capital increase from the receivables and contribution in cashes. Based on the result of this hypothesis, it can be inferred that companies to increase their investment opportunities used of contribution in cashes and capital increase and from this way, the stock returns will be increased. However, this hypothesis can be considered as a basis for new research and identify affecting factors on stock returns. The result of this theory correspond with Di Giuli ⁸ that express that better investment opportunities lead to more extensive use of the stock.

Third theory: growth Opportunities has significant effect on the annual adjustment

Based on the statistical results should be expressed, given that significant level of F- statistic (8.175) has obtained less than 5%, so the regression model is significant ($\text{sig} < 0.05$). Thus we can reject H_0 theory with assurance more than 95 percent and accept the research H_1 theory. It means that growth opportunities have significant effect on the firm's annual adjustment at the error level of 5%. That is whatever growth opportunities for companies to increase corporate annual adjustment also increases, so that if corporate growth opportunities increase 1 unit, corporate annual adjustment will increase 0.93 units significantly. Based on the results of this hypothesis should be stated according to the requirement to present comparative figures and maintain consistency from period to other period always expect that presented figures for each of the for each of the financial elements in the financial reports of current period be equal to represented renewal figure for the same case in the financial reports of the next year. But in some cases there is no equality. Not being equal the initial represented figure of financial statement items with represented renewal figure often is caused by one or more cases of change factors in accounting policy, mistakes, revising in estimates made by management and classification of item changes. Among the four mentioned factors, only the first two factors; that is change in accounting policy and correction of errors is part of classified annual adjustments and their effects be retroactive. In fact, the purpose of the number

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of Restatement in this study, Changes which have occurred as a result of one of the two mentioned factors and done changes due to changing in classification and changes in estimates has not included in counting the number of occurred restatements. Overall, the annual profit and loss account, is the account that the accumulated remaining profits (loss) in the beginning of the period has been recorded in it and has been transferred with other permanent accounts from prior year to new year. In current year we may notice due to two main reasons that remain of prior year need to adjustments or error relating to recognition of revenues and expenditures relating to prior years has been occurred or we have done changes in accounting policies that its effect on past results is necessary (which is extremely rare). Annual adjustments effect should be reflected by correcting the accumulated balance of profits (loss) of the beginning of the period in the financial statements. Comparative items of financial statements also must be re-presented.

REFERENCES

1. Shabahang, R. & Hasan Ghorban, Z. (1998). "evaluating the effect of top - management' salary on company performance from standpoint of shareholders". *Management and economy magazine*; 39: 5-22
2. Sinaee, H. & Rezayian, A. (2004). Surveying the effect of company properties on capital structure. *Bulletin of social and human sciences*; 133-138.
3. Myers, S.C. (1997). Determinants of Corporate Borrowing. *Journal of Financial Economics*; 5(2): 147-175.
4. Jensen, M. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*; 76 (2): 329-423.
5. Liang, H. & Bathala, C. (2009). Tradeoff or Pecking order: Capital Structure Policy Suitable for Financially Distressed Firms. *The IUP Journal of Applied Finance*; 15(10): 5-18.
6. Viviani, J. L. (2008). Capital Structure Determinants: An Empirical Study of French Companies in the Wine Industry. *International Journal of Wine Business Research*; 20(2): 171-194
7. Paul, A.G., David, H.L. & Yuan, S. (2009). Agency Problems and Audit Fees: Further Test of the Free Cash Flow Hypothesis. *Journal of Accounting and finance*; 50(2): 321-350.
8. Di Giuli, A. (2013). "The effect of stock misevaluation and investment opportunities
9. Fresard, L. & Salva, C. (2010). The value of excess cash and corporate governance: Evidence from US cross-listings. *Journal of Financial Economics*; 98(2): 359-384.
10. Yahya Zadeh Far, M., Shams, Sh.A. & Pakdin Amiri, M. (2013). Surveying the effect of growth opportunities on vaulting free cash flow", *auditing and accounting studies, Management College of Tehran University*; 20(1): 113-132