

Relationship between Some Opportunistic Behavior Criteria of Managers and the Profitability of Firms in the Tehran Stock Exchange

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ABSTRACT

This study investigates the relationship between profitability and free cash flows, financial leverage, and institutional ownership. To calculate the ratio of institutional ownership, the researchers have used the ratio of free cash to total assets for free cash flows, the ratio of book value of long-term debt to total book value of assets for financial leverage, and the return rate of shareholders equity and the total shares in banks, insurance institutions, capital state supplier firms, retirement boxes and governmental institutions.

To testing the four hypotheses a sample of 68 firms from 2006 to 2010 were selected. The firms were investigated by cross-sectional methods simple and multiple variable regression models. The results of the investigation show a direct and significant relationship between profitability and free cash flow, financial leverage, and institutional ownership.

KEY WORDS: free cash flow, financial leverage, institutional ownership, profitability.

1-INTRODUCTION

The main reason of creation of a profit unit is gaining profit. Obtaining and increasing the profit had always been one of the goals of companies. The profit which has been in the income statement ever is one of the evaluation base and the company that could receive more profit, would be more successful. The profit of accounting would undulate by alternation in the methods of accounting and also with change in the management decisions. One of the elements which could cause undulation in companies is the manager opportunistic behavior. The purpose of manager opportunistic behavior is the investment decisions that have been made by managers on insecure and risky situations and they usually have different output in comparison to the regular situations of operation. The effects of these kinds of decisions usually cause the undulation in profit of commercial companies.

Financial reports are the most important products of accounting systems. The major goal of such reports is to provide necessary information to assess the ability of firms to be profitable and to predict future cash flows. One of the accounting items in the presentation of profit and loss is net profit [1]. Investors and shareholders seek to gain maximum profit from limited resources and facilities. Thus, awareness of profitability factors has special importance for this group. One of the important aspects of accounting profit is its role in financial supply contracts. Debts are one of the reasons for changes in profitability and can lead to profit fluctuations in commercial units by changing the opportunistic behavior of managers. Also, the amount of free cash flow can affect the opportunistic behavior of managers. When investment opportunities (actual and potential) increased, the majority of surplus funds is used to increase the shareholders and investors wealth through investment in available opportunities, and an increase in investment will lead to a reduction of surplus funds [2], Which affects the profitability of firms.

Shareholders are one of the main groups who use financial statements. Institutional investors have considerable influence in firms that accept investments and they can influence the behavior and performance of firms caused by managers' opportunistic behavior [3]. And as a result, they can affect firm' profitability during different periods. In this research, the researchers test the effect of the free cash flow and also the institutional investors on profitability in addition to the gradual fluctuations of financial leverage. The aim of this research is to investigate the influence of free cash flows, financial leverage, and institutional ownership on profitability and to present these relationships in a mathematical model.

2-Theoretical base and research background

Profitability points to the ability of the firm to achieve a profit. It is the result of all the programs and financial decisions. To measure profitability, often the variables of interest are sales, returns on assets, and returns on shareholder equity [4].

The best way to measure profitability or assess performance among all these variables is to calculate shareholders equity return rate and the rate of the return on assets [5]. The return on shareholder equity is a way

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to employ the monetary unit of the shareholders equity return, and therefore has special importance. The rate of return on shareholder equity includes three important leverage of performance: the profit margin, the assets turnover, and financial leverage. The attention of management to these three ratios can have a favorable effect on returns on shareholder equity, regardless of the kind and size of the firm, in contrast to sales margins and changes in asset turnover.

$$\text{Rate of return shareholder equity} = \frac{\text{asset sum}}{\text{shareholders equity}} \times \frac{\text{net profit before tax}}{\text{asset sum}}$$

This ratio is the yield that each unit has gained for investors and also is one of the most important accounting ratios that measure the net profit ratio to the normal shareholder equity.

Net profit, in the calculation of yield return, is used after the deduction of interest but before counting any unusual and indirect items and taxes in order to account for the investment of shareholders without defining the usual and unusual items [6].

Outside and inside of the country, there is no direct research concerning the relationship between institutional ownership and profitability. Therefore, we will point out some similar research:

Hashemi and Kamali (2010) studied the influence of increasing financial leverage, high free cash flow rates, and growth of the firm on management benefits in accepted firms in the stock exchange market. The results show no significant difference in the amount of interest management in firms that always have a high degree of leverage and firms which gradually increase financial leverage. Other results show that free cash flow and the growth of the firm are effective factors in managers' opportunistic behavior that affected the amount of profit management.

Mehrani and Bagheri (2009) studied the influence of free cash flows and institutional shareholders on profit management by observing information from 90 firms that had been accepted in the Iran stock exchange market from 1999 to 2005. The results showed a direct, significant relationship between profit management and high free cash flow in firms with low growth and no significant relationship between profit management and disciplinary shareholders in which firms with high free cash flow and low growth.

Chung et al. (2005) investigated the relationship between profit management and free cash flow in firms with low growth from 1984 to 1996 by observing information from 22,576 firm year American firms and concluded that there is a direct, significant relationship among variables. Managers of firms with much free cash flow and low growth used voluntary accruals to abolish low interest and losses from investments in projects with a negative net present value. They also discovered that the influence of institutional shareholders and audit firms on the quality of audits causes a weakening of the relationship between profit management and free cash flow and prevents managers from profiting.

Jones and Sarma (2001) tested the relationship between profit management and free cash flow in firms with low growth and concluded that, in the firms with low growth, there is direct, significant relationship between voluntary accruals and free cash flow. So, in this kind of firm, managers try to improve the weak performance of commercial units through voluntary accruals, but in firms with high growth, they did not found such direct significant relationship. The appearance of the privatization phenomenon in the Czech Republic caused to change the way of reign in some firms in a short time.

3- Hypotheses

- 1) There is a significant relationship between free cash flow and profitability.
- 2) There is a significant relationship between financial leverage and the profitability.
- 3) There is a significant relationship between institutional ownership and profitability.
- 4) There is a significant relationship between profitability and free cash flow, financial leverage, and institutional ownership.

4-METHODOLOGY

This research is classified research based on the goal and application. To test the hypotheses, it has used historical information, so this research is a test Quasi-experimental. To test the relationship between independent and dependent variables and also significant, regression analysis has been used. Data from 2006 to 2010 (a 5-year period) related to firms that are members of the investigation were gathered from Dena Sahm and Tadbirpardaz sources. After the necessary calculations of variables, statistical tests were done using SPSS version19.

5-population and sample

The population for this study includes all accepted firms in the stock exchange market that have the structure of their capital Institutional shareholder. Among these firms, the finance inductor firms were removed because of the special nature of their activities. We considered the firms that met the conditions below:

- 1) There is no gap of more than three months in its exchange of shares(except for the usual period for holding general meetings).

- 2) The firm must have at least 70 trading days in every year (the purpose of reliable shares).
- 3) The firm did not change its accounting year during the research period.

Among the firms accepted in the stock market, 68 firms met all the conditions and are the sample for testing

6-Variables and methods of measurement

6-1-Dependent variables

The profitability:

$$\text{ROE (Return on equity)} = \frac{\text{profit before tax deduction}}{\text{financial equity of shareholders}}$$

6-2 independent variables

1-Free cash flow (FCF):

$$\text{FCF} = \text{OI} - \text{T} + \text{DEP} - \text{NI} - \text{WCR}$$

The free cash flow in this investigation is calculated by using the formula for the purpose of moderating the effect of various factors before year t (for uniformity and standardization) divided by the book value of total assets.

$$\text{Free cash flow} = \frac{\text{changes in floating capital} - \text{net investment} - \text{amortization} + \text{tax} - \text{operating profit}}{\text{total assets}}$$

Because the data are not normal, is used the above ratio logarithm above, as the index of free cash flow,

2- Financial leverage:

The ratio of the book value of long-term liability to the book value of total assets is used as the financial leverage index:

$$\text{financial leverage} = \frac{\text{the book value of long - term liability}}{\text{the book value of total asset}}$$

3- Institutional ownership:

To calculate the amount of the institutional ownership in a firm, the total shares in banks, insurance institutes, investment firms, the retirement boxes, capital state supplier firms, and governmental institutions are divided into issued shares, which is the amount of institutional ownership.

7-Research hypothesis tests

After calculating profitability by using the rate of return on shareholders equity, other research variables including the degree of financial leverage, free cash flow, and institutional ownership were also calculated. In the next step, the hypotheses were tested by putting the independent and dependent variables into model the research. Descriptive statistics related to the measured variables are as follows:

Table 1: Descriptive statistics data

Variable	Amplitude	minimize	maximize	Average	standard deviation	variance	cholgi coefficient	elongation coefficient
Y	0/69	0/61	1/3	0/9682	0/14394	0/021	0/248	-0/321
X ₁	0/67	0/000	1/42	0/9086	0/3864	0/149	-1/758	1/522
X ₂	0/57	0/42	0/99	0/6588	0/11823	0/014	0/202	-0/507
X ₃	0/3263	0/458	0/372	0/18366	0/76	0/57396	0/278	-0/646

In Table 1: Y= profitability (ROE), x1= free cash flow (FCF), x2= financial Leverage, and x 3= institutional ownership (MST).

7-1 First hypothesis test

The results of the regressions that test the relationship among profitability and free cash flow, financial leverage, and institutional ownership are shown in Table 2 to 5.

Table 2 shows the relationship between free cash flow and profit. The F statistic in the table shows that the model is significant at the 95% level. The coefficient of pattern determination shows that the independent variable explains about 15 percent of profitability changes. Model 1 shows a direct and significant relationship between profitability and free cash flow and the coefficient of the FCF variable is positive and significant at the 95% confidence level, which shows that profitability increased with the increase in free cash flow.

Table 2: The influence of free cash flow on profitability

$$\text{ROE} = \alpha_0 + \beta_1 \text{FCF} + \epsilon_0$$

Pierson adhesion coefficient	Level of significant	The coefficient of appointment	The coefficient of modified
0/384	0/000	0/148	0/145

F statistic: 50/077
 The amount of probably related to the test 0/715
 The model is as follows:
 Profitability= ϵ_0 + the free cash flow 0/509+0/431

7-2 Second hypothesis test

Table 3 shows the results related to the relationship between financial leverage and profitability. The F statistic in the table shows that the model is significant at the 95% level and shows the coefficient of pattern. The independent variable explains about 0/016 of the changes in profitability, which means that about 1/6 percent of the changes in the dependent variable are determined by independent financial leverage. These results show that the model is very weak. Pattern 2 shows a reverse and significant relationship between profitability and financial leverage. And the negative and coefficient of LEV is significant at 95% level, which shows that profitability decreases when financial leverage increases.

Table 3: Effect of financial leverage on profitability

$$ROE = \alpha_0 + \beta_1 FCF + \epsilon_0$$

Pierson adhesion coefficient	Level of significant	The coefficient of appointment	The coefficient of modified
0/126	0/021	0/016	0/012

F statistic: 5/41
 The amount of probably related to the test 0/715
 The model is as follows:
 Profitability= ϵ_0 + financial leverage 0/151-0/068

7-3- Third hypothesis test

Table 4 shows the results of the regression pattern relating profitability to financial leverage and institutional ownership.

The F statistic in Table 4 shows that results are significant at the 95% level. The determination coefficient shows that the independent variable explains about 9% of profitability changes. Pattern 3 shows a reverse and significant relationship between profitability and financial leverage. The negative and significant coefficient of the MST variable at the 95% confidence level show profitability decreases when the institutional ownership ratio increases.

Table 4: The effect of institutional ownership on profitability

$$ROE = \alpha_0 + \beta_1 FCF + \epsilon_0$$

Pierson adhesion coefficient	Level of significant	The coefficient of appointment	The coefficient of modified
0/3	0/000	0/09	0/087

F statistic: 33/449
 The amount of probably related to the test 0/16
 The model is as follows:
 Profitability= ϵ_0 + institutional ownership 1/07-0/006

7-4- Fourth hypothesis test

Table 5 shows the regression results related to free cash flow, financial leverage, and institutional ownership. The F statistic shows that pattern is significant at the 95% confidence level and the coefficient of the pattern shows that the independent variable explains about 1/016 of profitability changes. That is, about 1/6 percent of variable changes are determined by the independent variables, which shows that the pattern is very weak.

Pattern4 shows a reverse and significant relationship between profitability and financial leverage.

Table 5: The effect of the independent variable on profitability

$$ROE = \alpha_0 + \beta_1 FCF + \beta_2 LEV + \beta_3 MST + \epsilon_0$$

Pierson adhesion coefficient	Level of meaningful	The coefficient of appointment	The coefficient of modified
0/128	0/000	0/016	0130/

F statistic: 33/449
 The amount of probably related to the test 0/681
 The model is as follows:

Profitability = $\varepsilon_0 + \text{institutional ownership} + 0/156 \text{ financial leverage} - 0/19 - 0/949 \text{ Free cash flow}$

8-Conclusion

The results from the test of the first hypothesis show that the profitability of a firm increased despite free cash flows. On the basis of the results of the second hypothesis, we can say that sample firms in this research gave priority to home source supply because of information clarity. The results of this hypothesis agree with the theory of financial supply option hierarchy and informational asymmetry and contrast with the theory of sustainable or fixed balance according to the relationship between positive financial leverage and profitability in the results related to the tax benefits of debts, which increase the value of a firm that has debt in its investment structure. The findings for the third hypothesis show that the combination of firm board is affected by institutional shareholders, which means that according to the hypothesis, personal advantages don't encourage management to improve firm function, because major institutional shareholders access secret information. According to the results of the fourth hypothesis, we can say that in some firms that have institutional shareholders in their structure, the rate of free cash flow decreases with gradual increases in financial leverage, and so the rate of management authorities decreases by using cash, which would lead to decreasing profitability.

9- Suggestions based on the research

It is suggested that stock exchange firms, instead of providing foreign sources (loans and debt), publish bonds and privileged or normal shares to increase their profitability in the financial period. Prior research has emphasized the important role of institutional shareholders in controlling managers' behavior, which leads to increasing profitability. But the results of this research show that institutional shareholders do not play an appropriate role, so we suggest that the stock exchange organization identify the obstacles and the reasons for the lack of motivation for institutional shareholders to interfere in the affairs of firm and try to create the necessary mechanisms for removing the obstacles and to prevent the blocking of the benefits by the institutional investors and other investors.

10-Suggestions for further research

Study other foreign controllers such as the kind of industry and the influence of auditing firms on the adjustment of relationships between the variables of study. The relationships of free cash flow, financial leverage, and institutional ownership on profitability have been studied in this research. It is proposed to study the influences of free cash flow, financial leverage, and institutional ownership on profit management, the policies of profit dividing, and profit shares (the prize share), the quality of profit, the amount of auditing fees, and so on. The investors can be mentioned these relations as one of the investment standards.

In this study, the rate of return on equity was used to measure profitability. It is proposed that other patterns of measurement be used in the next study and the results compared to those of this investigation.

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