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Cash Flow and Stock Market Value (Case Study: Tehran Stock Exchange)

Minoo sharifi[a], Asghar Asadi[b]

[a]*Master student in accounting, Azad University, Tehran, Firoozkooh*

[b]*Assistant Professor of Accounting, Islamic Azad University, Tehran, Firoozkooh*

Abstract

In this paper, we study the relationship between cash flows and stock value. In doing so, we investigated financial information of 102 companies listed on Tehran Stock Exchange during 2009-2014 and analyzed the results using SPSS 20, EVIEWS 7 and MINITAB 16. The results indicated a significant inverse relationship between corporate free cash flow and actual stock price. We also found that there was a significant inverse relationship between free cash flow of stockholder and actual stock price and a significant direct relationship between capital cash flow and actual stock price. Finally, we concluded that cash flow and actual stock price were directly correlated.

Keywords: Corporate free cash flow, actual stock price, free cash flow of stockholder, capital cash flow, operating cash flow, panel data

1. Introduction

Investor's benefits in a firm include future profit, future cash flows and payment of future cash profit [1-3]. Investors demand to get information on these benefits, particularly future profit and future cash flows. They seek to estimate the profit and cash flows resulting from modern technologies used the firm in which they have invested, so that they can predict future cash profit and stock value based on the available investment opportunities [4-5]. To estimate the receipt of future cash profit, they need to get some information on future profits because profit is the most important source of information on a firm's ability to pay future profit [6-9]. They also need sufficient information on cash flows to evaluate their stock value because most stock evaluation models are based on current value of the expected cash flows. Therefore, investors demand future profit and future cash flows as two investment benefits. Since the information on the expected cash flows are unavailable, profit prediction is used as a substitute for cash flows [10-12]. The much attention paid to future

cash profit is explained by the effort to link the value of negotiable papers to future benefits of investment. The prediction of future cash profit is essential to the use of many stock evaluation models. According to Elson, only distribution of the predicted profit may have public reputation for investment in negotiable papers. He also maintains that the value of negotiable papers is a function of the expected cash profit which has been modified according to risk [13-14].

Investors consider profit as a firm evaluation criterion. Profit consists of two main parts: the first is cash portion which represents the cash funds obtained from operating activities during a specific time period. The other is accruals which consist of optional and non-optional components. Non-optional accruals are those items which are normally developed as the result of transactions and are less manipulated by managers. Receivable and payable accounts are examples of non-optional accruals. Optional accruals are those items which are subject to change based on managerial decisions [14-16]. In other words, they are influenced by processes

and policies adopted by firms. Depreciation cost, income from investments; profit and loss arising from the sale of fixed assets, pure depreciation and deduction of bonds are some examples of optional accruals.

Since it is impossible to manipulate profit through cash funds obtained from operating activities and non-optional accruals, managers usually use optional accruals to manage profit. In financial literature, therefore, optional accruals are considered as an index of profit management and profit reliability. In financial literature, a variety of methods have been proposed for measuring accruals, including total discretionary accruals method [17-19], working capital discretionary accruals method [20], frequency distribution method [21-24], unique accruals method [25].

The issue of profit distribution policy and the expected stock return has long been addressed in the field of financial management. The influential factors and the impacts on corporate performance have not been yet specified, so it is known as dividend puzzle. Making decision on how to predict the expected stock returns is one of the most important decisions to be made in firms [26], so it is no strange that many studies have been done in this connection. The volatility of market value stems from such factors as systematic risk, divided profit amount, and corporate credit ratings [27]. The paid dividend comes from actual stock return rate in the past periods and the volatility of expected stock return arises from the volatility of corporate market value. One of the effective factors in the expected corporate stock returns is market recession or boom based on such factors as systematic risk, volatility corporate market value, and corporate book value [29]. Market recession refers to a situation in which the average market return in a given year is less than inflation rate in the same year [28-30]. On the other hand, market boom refers to a situation in which the average expected market return in a given year exceeds the inflation rate in the same year [31]. Corporate return recession is another controversial issue in the modern age.

Given the main goal of this study, we attempt to determine if there is a significant relationship between cash flows and stock value in the companies listed on Tehran Stock Exchange.

2. Review of Literature

Hou et al. [32] conducted a research under title of "prediction of cash flows, capital expenditure and expected returns" and investigated the relationship between the said three variables. They found that profit prediction based on other predictions is associated with cash flow and profit prediction factors. Regarding the relationship between capital cost and the expected stock returns, they concluded that the expected return index was the same as stock return predictions.

In a research entitled "the relationship between the ratio of market value to book value, growth opportunities and the ratio of financial leverage", Long Chen and Zhao Xinlei [14] investigated the relationship between the

ratio of market value to book value and three independent variables: financing costs through debt, financing decisions and financial leverage ratio. They expected that the firms with high ratio of market value to book value should have less debt costs. But the firms with low ratio of market value to book value were found to repay their debt more than others.

Shian [81-82] explored the superiority of profits over cash flows in reflecting the firms in international level. They found that there was a positive relationship between profit, net cash flows and operating cash flows in both time intervals in six countries. However, R^2 value of profits was bigger than net cash flows and operating cash flows.

Daniel and Titman [77] investigated the excessive reaction of investors in stock market and proposed a model stating that stock prices show excessive reaction to intangible information than to tangible information [information which is extractable from financial statements].

Kerr et al. [61] investigated the impact of privatization on firms and stock market in New **Zealand and Australia. They found that privatization significantly improved corporate** performance. According to their results, privatization increased annual corporate growth rate of New Zealand and Australian firms by 12% and 9% respectively.

Casterido [79] explored the relationship between sensitivity of cash-investment flows and investment costs using financial information of 7176 companies listed on New York Stock Market during 1985-2003. They found the sensitivity of cash flows is associated with understated investment when cash flow is low and is associated with overstated investment when cash flow is high.

Chang et al. [47] investigated the impacts of corporate governance on liquidity of stock market using 24 governance indexes relating to financial and operating clarity and governance proprietary structure. They hypothesized that weak governance increases information asymmetry between domestic and foreign investors, which has negative impact on liquidity. Where corporate governance is weak, dealers develop more price gap. They found that better corporate governance increased liquidity and reduced price gap.

Riddick and Wited [62] reinvestigated the relationship between sensitivity of corporate liquidity flow and liquidity amount. They reported that there was a positive relationship between sensitivity of liquidity flow and cash assets where no amendment exists for component Q^* [control variable in empirical model]. Given the standard deviation consequent upon measurement error Q using GMM^+ estimation, they found that there was a negative relationship between the sensitivity of liquidity flow and liquidity amount. However, their empirical models lack such control variables as corporate size, capital expenditure, non-cash revolving capital, and short-term debt.

Adlin and Prisnia [64] reported that improvement of liquidity in Malaysian stock market requires an increase in corporate free float share percentage, because foreign investors do not tend to invest in a market with low float share. They concluded that the increased free float share and stock liquidity was one of the efficient solutions for attracting international investors.

Fadaei and Saghafi [54] investigated cash flow prediction models of investment companies listed on Tehran Stock Exchange during 2005-2011. They found that the models which used accruals in the prediction of cash flows tended to have higher production capability compared with models which were merely based on cash flow.

Roudneshin and Kordestani [51] investigated the relationship between cash components and accruals of accounting profit and market value. They found that cash components of accounting profit was able to predict and explain market value, but three accrual components of accounting profit [changes in receivable accounts, changes in goods stock, and changes in payable accounts] were not able to predict and explain market value.

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* *Tobin's Q*
+ *General Method of Moment*

Therefore, they concluded that cash components of accounting profit were more associated with market value.
Modarres [50] explored the application of multivariable time series model in the prediction of operating cash flows for 40 companies during a 19-year period. They reported that historical cash flows were not able to predict future operating cash flow but historical profits were able to do so. They also reported that simultaneous use of historical operating cash flows and historical profits significantly improved prediction ability of the model.
Kashanipoor, Mohammad and Naghinejad, Bijan [49-50] proposed a model for optimal cash reserves considering all effective factors in order to determine optimal corporate liquidity. This

equation is based on a fundamental hypothesis: "firms act intelligently and seek to keep cash reserves at an optimal level in order to meet the interests of their investors."
Janat Rostami [42] investigated the role and capability of profit in the prediction of future profit and cash flows for investment in companies listed on Tehran Stock Exchange. He concluded that there was a significant relationship between the past and future profits and between the past profit and cash flows and future cash flows.
Ghalibaf and Naderi [43] addressed the varied reactions of people to new information published in Iran Stock Market and irrationality of their behavior and investigated the excessive reaction of investors to information and news published in internal recession and boom conditions. They concluded that investors did not show excessive reaction in short-term to information and news published in recession and boom conditions.
Hossein Etemadi [49] investigated the impact of IT on qualitative traits of accounting information. He found that IT increased the relativeness of accounting information, reduced the reliability, and somewhat increased the capability to compare information. He explored the impact of IT on all components of qualitative traits of accounting information and represented the impacts in a qualitative manner.
Arab Mazar Yazdi et al. [56] investigated informational content of cash flows and accruals as well as the association between stock returns and profit and its components. They found that profit had more informational contents than operating cash flows had. The results confirmed the increasing informational content of accruals compared with operating cash flows. Their findings also confirmed the increasing informational content of discretionary accruals compared with non-discretionary accruals.

3. Research Method

Statistical Population

The statistical population of this research consists of all companies listed on Tehran Stock Exchange during a six-year period [from 2009 to 2014]. After applying the presumptions, we selected 102 firms from 19 industries.

Hypotheses:

- H1: There is a relationship between corporate free cash flow and actual stock price.
- H2: There is a relationship between stockholder free cash flow and actual stock price.
- H3: There is a relationship between capital cash flow and actual stock price.
- H4: There is a relationship between operating cash flow and actual stock price.

Research Variables

Corporate free cash flow was computed as follows:

$$Fcff = cf_0 - fcInv$$

Where:

$Fcff$ – Corporate free cash flow

cf – Operating cash flow

$fcInv$ – Net investment in fixed assets

Operating cash flow tops cash flow statement. Net capital expenditure [cash funds paid for the purchase of fixed assets] was obtained from investment activities section of the statement and then free cash flow was computed. Stockholder free cash flow [$Fcff$ *] can be obtained by $Fcff$.

Net increase in principal financial facilities - $Fcff$ = $fcFe$

Finally, we processed the following models using regression method to investigate the volatilities of explanation amount of $Fcff$ and $fcFe$ during the period under study:

$$P_{i,t} = \beta_0 + \beta_1 fcff_{it} + e_{i,t}$$

$$P_{i,t} = \beta_0 + \beta_1 fcfE_{it} + e_{i,t}$$

Research Models

We tested hypotheses 1-4 using models 1-2 as follows. If β_i factors [independent variables factors] were significant with confidence level of 95%, hypotheses 1-4 would be confirmed. Finally, we processed the following models using regression method to investigate the volatilities of explanation amount of $Fcff$ and $fcFe$ during the period under study:

Model 1:

$$P_{i,t} = \beta_0 + \beta_1 fcff_{it} + e_{i,t}$$

Model 2:

$$P_{i,t} = \beta_0 + \beta_1 fcfE_{it} + e_{i,t}$$

Research Hypotheses Model:

$$P_{i,t} = \alpha_0 + \beta_1 (X_1 X_1)_{i,t} + \beta_2 (X_2 X_2)_{i,t} + \beta_3 (X_3 X_3)_{i,t} + \beta_4 (X_4 X_4)_{i,t} + \beta_5 (X_5 X_5)_{i,t} + \varepsilon_{i,t}$$

Where:

i represents the firm [temporary units] and t represents the year.

$\varepsilon_{i,t}$ = Random error of firm *i* in year *t*

Analysis Method

In this study, we employed multivariable linear regression model to test the hypotheses. The statistical method used in this study was panel data method. We tested the hypotheses using SPSS21, EVIEWS 7 and MINITAB16.

4. Data Analysis

In this part, we test the hypotheses using the data collected from statistical sample consisting of 102 firms during 2009-2014. We did so by panel data method using SPSS21, EVIEWS 7 and MINITAB16.

Descriptive Statistics

Table 1 contains the summary of descriptive statistics for the research variables after screening and omission of outliers by SPSS 20.

Table 1- Descriptive Statistics of Research Variables

Variable	Number of Observations	Mean	Standard Deviation	Lowest Value	Biggest Value	Skewness	Kurtosis
Stock price	612	0.2445	0.2624	0.0002	2.7608	3.346	19.735
Free cash flow	612	0.4140	0.0712	0.0331	0.5631	-1.009	2.418
Operating cash flow	612	0.4054	0.0943	0.0000	0.5591	-1.461	3.175
Stockholder cash flow	612	0.7064	2.8420	0.0116	70.7600	24.591	607.121
Capital cash flow	612	0.3270	0.3672	0.0000	2.7159	3.123	14.890
Firm size	612	5.7868	0.6058	4.6303	7.9048	0.813	0.756

The mean stock price of the sample firms is 0.2445 and the lowest and biggest values are 0.0002 and 2.7608 respectively. This variable does not have normal distribution because its skewness and kurtosis are not 0 and 3. According to descriptive statistics contained in Table 1, the mean free cash flow, operating cash flow, stockholder cash flow and capital cash flow of the sample companies during the period under study are positive [0.4140, 0.4054, 0.7064 and 0.3270 respectively]. Also, the mean positive firm size is 5.7868.

Distribution Normality Test of Dependent Variable

In this study, we used normal least squares method to estimate the parameters.

Table 2- The results of dependent variable normality test

Variable	Number [N]	Statistic [K-S]	Sig.
Stock Price	612	4.426	0.000

Since the significance level of K-S statistic for stock price variable is less than 0.05, distribution normality of the variables is rejected with confidence of 95%.This indicates that stock price variable does not have normal distribution.

Table 3- Normality test results for dependent variable after normalization process

Variable	Number [N]	Statistic [K-S]	Sig.
Stock Price	612	0.704	0.705

According to Table 3, since the significance level of Kolmogorov-Smirnov statistic of the dependent variable is bigger than 0.05 [0.705], the normality is confirmed with confidence level of 95%. This indicates that stock price variable has normal distribution after normalization process.

Correlation between research variables

According to Pearson statistic results, corporate free cash flow is positively and significantly correlated with operating cash flow. Also, operating cash flow is negatively and significantly correlated with stockholder cash flow.

Table 4- Pearson correlation coefficients matrix between research variables

Firm Size	**Capital Cash Flow**	**Stockholder Cash Flow**	**Operating Cash Flow**	**Free Cash Flow**	**Stock Price**	
					1	Stock Price [P-Value]
				1	0.072 [0.075]	Free cash flow [P-Value]
			1	0.712 [0.000]	0.045 [0.271]	Operating cash flow [P-Value]
		1	-0.127 [0.002]	-0.054 [0.179]	-0.014 [0.729]	Stockholder cash flow [P-Value]
	1	-0.016 [0.692]	-0.007 [0.855]	0.031 [0.445]	-0.006 [0.882]	Capital cash flow [P-Value]
1	0.048 [0.237]	0.006 [0.885]	0.023 [0.568]	0.020 [0.615]	-0.005 [0.904]	Firm Size [P-Value]

Research Hypotheses

We tested the first hypothesis to determine the relationship between corporate free cash flow and actual stock price. The statistical hypothesis is defined as follows:

H0: There is not a significant relationship between corporate free cash flow and actual stock price.

H1: There is a significant relationship between corporate free cash flow and actual stock price.

We estimated this hypothesis in the form of panel data using model 1.

Table 5- Chow & Hausman test results for model 1

Test	**Number**	**Statistic**	**Statistic Value**	**Degree of Freedom**	**P-Value**
Chow	612	F	1.5799	[506,101]	0.0008
Hausman	612	χ^2	3.2492	4	0.0170

Based on Chow test results and P-Value [0.0008], H0 is rejected with confidence level of 95%, so panel data method can be used. Also, based on Hausman test results and P-Value of 0.0170 [which is smaller than 0.05], H0 is rejected with confidence level of 95% and H1 is accepted. There is a variety of tests for examining the normality of error sentences. In this study we used Jarque-Bera test. The results obtained from Jarque-Bera test indicated that the residuals from research model estimation had normal distribution with confidence level of 95%. We also used Breusch-Pagan test to investigate the homogeneity of variances. Since the significance level of this test was smaller than 0.05 [0.0310], H0 was rejected and the model was found to have the problem of variance heterogeneity. To remove this problem, we employed generalized least squares [GLS] estimation method. We also used Durbin-Watson test to examine the lack of correlation between the residuals as one of the assumptions of regression analysis. According to initial estimation results, the value of Durbin-Watson statistic was 2.25. The statistic being between 1.5-2.5 indicated that the residuals were independent from one another. Furthermore, we used Ramsey test to determine whether the model has linear relationship and whether the model had been properly explained in terms of linearity or non-linearity. Since the

significance level of Ramsey test was bigger than 0.05 [0.6804], H0 for linearity was confirmed and the model was found to be free from error. Table 4-6 contain the summary of the aforementioned test results:

Table 6- Test results for statistical assumptions of model 1

Jarque-Bera Statistic		**Breusch-Pagan Statistic**		**Durbin-Watson Statistic**	**Ramsey Statistic**	
χ^2	P-Value	F	P-Value	D	F	P-Value
1.9486	0.8521	0.5596	0.0310	2.25	0.3853	0.6804

Based on the results obtained from Chow and Hausman tests and classic regression statistical assumptions test, model 1 was estimated using panel data method in the form of constant impacts. Model estimation results are contained in Table 7.

Table 7- First hypothesis test results using constant impacts method

Dependent variable: stock price				
Number of observations: 612 years – firm				
Variable	Coefficient	T Statistic	P-Value	Relationship
Fixed component	1.3648	6.7182	0.0000	Positive
Free cash flow	-0.1751	-1.7540	0.0300	Negative
Operating cash flow	-0.0521	-1.9328	0.0014	Negative
Stockholder cash flow	0.0025	2.4836	0.0289	Positive
Capital cash flow	0.0199	1.6566	0.0182	Positive
Firm size	-0.2032	-5.9421	0.0000	Negative
Model determination coefficient: 0.9140				
F Statistic: 2.1810 P-Value: 0.0000				

Since statistic F is smaller than 0.05 [0.0000], the entire model significance is confirmed with confidence level of 95%. Also, determination coefficient indicates that 91.40% of the firms' stock price is explained by the variables incorporated in the model.

According to the results shown in Table 7, statistic t probability for free cash flow variable coefficient is smaller than 0.05 [0.0300], so the significant relationship between corporate free cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the first hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between corporate free cash flow and actual stock price. The negative coefficient of this variable [-0.1751] indicates the inverse relationship between corporate free cash flow and actual stock price. In other words, if corporate free cash flow increases by 1 unit, actual stock price of the firm reduces by 0.1751. Therefore, according to the analysis for the first hypothesis, there is a significant inverse relationship between corporate free cash flow and actual stock price.

We tested the second hypothesis to determine if there is a significant relationship between stockholder free cash flow and actual stock price. The statistical hypothesis is represented as follows:

H0: There is not a significant relationship between stockholder free cash flow and actual stock price.

H1: There is a significant relationship between stockholder free cash flow and actual stock price.

We estimated this hypothesis in the form of panel data using model 1. According to the results shown in Table 7, statistic t probability for operating cash flow variable coefficient is smaller than 0.05 [0.0014], so the

significant relationship between stockholder free cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the second hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between stockholder free cash flow and actual stock price. The negative coefficient of this variable [-0.0521] indicates the inverse relationship between stockholder free cash flow and actual stock price. This means that if stockholder free cash flow increases by 1 unit, actual stock price of the firm reduces by 0.0521. Therefore, according to the analysis for the second hypothesis, there is a significant inverse relationship between stockholder free cash flow and actual stock price.

We tested the third hypothesis to determine the relationship between capital cash flow and actual stock price. The statistical hypothesis is represented as follows:

H0: There is not a significant relationship between capital cash flow and actual stock price.

H1: There is a significant relationship between capital cash flow and actual stock price.

We estimated this hypothesis in the form of panel data using model 1. According to the results shown in Table 7-4, statistic t probability for stockholder cash flow variable coefficient is smaller than 0.05 [0.0289], so the significant relationship between capital cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the third hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between capital cash flow and actual stock price. The positive coefficient of this variable [0.0025] indicates the direct relationship between capital cash flow and actual stock price. In other words, if capital cash flow increases by 1 unit, actual stock price reduces by 0.0025. Therefore, analysis of the third hypothesis indicates that there is a significant direct relationship between capital cash flow and actual stock price.

We tested the fourth hypothesis to determine the relationship between operating cash flow and actual stock price. The statistical hypothesis is represented as follows:

H0: There is not a significant relationship between operating cash flow and actual stock price.

H1: There is a significant relationship between operating cash flow and actual stock price.

We estimated this hypothesis in the form of panel data using model 1. According to the results shown in Table 7, statistic t probability for capital cash flow variable coefficient is smaller than 0.05 [0.0182], so the significant relationship between operating cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the fourth hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between operating cash flow and actual stock price. The positive coefficient of this variable [0.0199] indicates the direct relationship between operating cash flow and actual stock price. In other words, if operating cash flow increases by 1 unit, actual stock price increases by 0.0199 unit. Therefore, the analysis of the fourth hypothesis indicates that there is a significant direct relationship between operating cash flow and actual stock price.

5. Conclusion

In this paper, we investigated the relationship between cash flows and stock value. In doing so, we studied the financial information of 102 firms listed on Tehran Stock Exchange during 2009-2014 and analyzed the results using SPSS 20, EVIEWS 7 and MINITAB 16. We attempted to determine if there is a significant relationship between cash flows and stock value in the firms listed on Tehran Stock Exchange.

Test results for the first hypothesis: According to the results shown in Table 7, statistic t probability for free cash flow variable coefficient is smaller than 0.05 [0.0300], so the significant relationship between corporate free cash flow and actual stock price is confirmed with confidence level of 95%. In terms of the existence of significant relationship between the independent and dependent variables, the results obtained from the first hypothesis corresponds to the studies of Chirinko and Schaller [42], Jiang and Stark [43] and Dedman et al. [59]. However, in terms of the type of relationship [direct or inverse], the results corresponds to the studies of Faulkender and Petersen [68] and is contrary to the studies of Rhodes et al. [63] and Tippet and Ilnaz [67].

Test results for the second hypothesis: According to the results shown in Table 7, statistic t probability for operating cash flow variable coefficient is smaller than 0.05 [0.0014], so the significant relationship between

stockholder free cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the second hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between stockholder free cash flow and actual stock price. The negative coefficient of this variable [-0.0521] indicates the inverse relationship between stockholder free cash flow and actual stock price. In other words, if stockholder free cash flow increases by 1 unit, actual stock price of the firm reduces by 0.0521. Therefore, the analysis of the second hypothesis indicates that there is a significant inverse relationship between stockholder free cash flow and actual stock price. The results obtained from the second hypothesis correspond to the studies of Choi et al. [62], Dedman et al. [65] and Konver et al. [78] and are contrary to the studies of Rhodes et al. [71] and Yu et al. [75].

Test results for the third hypothesis: According to the results shown in Table 7, statistic t probability for stockholder cash flow variable coefficient is smaller than 0.05 [0.0289], so the significant relationship between capital cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the third hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between capital cash flow and actual stock price. The positive coefficient of this variable [0.0025] indicates the direct relationship between capital cash flow and actual stock price. In other words, if capital cash flow increases by 1 unit, actual stock price of the firm increases by 0.0025. Therefore, the analysis of the third hypothesis indicates that there is a significant direct relationship between capital cash flow and actual stock price. The results obtained from the third hypothesis correspond to the studies of Choi et al. [80] and Dedman et al. [81] and are contrary to the studies of Stro [82] and Heton [82].

Test results for the fourth hypothesis: According to the results shown in Table 7, statistic t probability for capital cash flow variable coefficient is smaller than 0.05 [0.0182], so the significant relationship between operating cash flow and actual stock price is confirmed with confidence level of 95%. Therefore, the fourth hypothesis is accepted and it could be said with confidence of 95% that there is a significant relationship between operating cash flow and actual stock price. The positive coefficient of this variable [0.0199] indicates the direct relationship between operating cash flow and actual stock price. In other words, if operating cash flow increases by 1 unit, actual stock price of the firm increases by 0.0199. Therefore, the analysis of the fourth hypothesis indicates that there is a significant inverse relationship between operating cash flow and actual stock price. The results obtained from the fourth hypothesis correspond to the studies of Konver et al. [46], Faulverker and Peterson [47] and Rhodes et al. [58] and are contrary to the studies of Bartov et al. [61] and Abarbanell and Bushee [82].

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