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EVALUATING INCREMENTAL INFORMATION CONTENT OF CASH FLOW OPERATIONS IN EXPLAINING COMPANY'S PERFORMANCE IN TEHRAN STOCK EXCHANGE

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ABSTRACT

This research was done, different from previous researches, focusing on evaluating incremental information content of cash flow operations in explaining financial, economic and marketing performance of accepted companies in Tehran Stock. Data of related variables were collected in 6 regression models, under 3 hypotheses in sample companies during 2007 to 2011. Multiple variable regression equations and adjusted correlation coefficients were used to test research hypotheses. Hypothesis test results showed that cash flow operations in explaining companies' financial performance include incremental information content related to net profit. Also, an additional study resulted in comparing competing regression models for each proposed hypotheses in order to generalize the results of differences between the explanation potency and the data associated load, and to extend the provided processing model to the target population by applying Wong Z statistics. The statistics showed that forecasting models in which the cash flow operations have been added as random variables into the model, has more explanatory power and information load than competing models.

Keywords: *Incremental Information Content, Return On Equity, Q-Tubini,t, Refined EVA, Cash Flow Operations, Net*

INTRODUCTION

One of the criteria regarded by financial management and management accounting is concept of economic value added (EVA). Through applying these criteria, economic benefits can be appropriately measured; and the objections related to accounting profit figure are removed to some extent. Despite all the advantages of this method, like decision reliability as compared to performance assessment methods, the criterion does not seem perfect. The fundamental flaw of the economic value added relies on historical figures. Although the economic value added uses some more reliable information, this information is not necessarily relevant. In other words, the economic value added calculates the implemented resources opportunity cost based on their equity book value (Bausch et al, 2003).

In recent years, some criticisms came up due to this technique preoccupying researchers and financial analysts so that they have attempted to find better criteria or refine the existing criteria to justify the criticisms concerning economic value added criteria. In an attempt to address this deficit, financial experts have suggested a refined version of economic value added known as Refined Economic Value Added (REVA) that instead of emphasizing on the reliability of information focuses on their relevance. In other words, this criterion calculates employed resources opportunity cost based on their market value (Bacidore et al, 1997).

The adjusted economic value added has been proposed in previous researches as an evaluation supplementary, a more important and efficient criteria than previous standards in companies' performance and researchers conducted a variety of studies on determining the ability of these criteria in evaluating the performances. This study, by examining the incremental information content of cash flow operations, seeks for answers to the question: How is incremental information load compared to benefit prior to extraordinary items in explaining companies' performances in Tehran Stock Exchange?

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RESEARCH BACKGROUND

Naderi Beni in his study entitled "Examining the incremental information content of earnings and cash flow operations with return on equity" reached the conclusion that the results of a market-based approach suggests the accounting earnings in comparison to cash flow operations with incremental information contents, but the opposite is not true; while in the correlation-based method, the opposite is true as well (Naderi Beni, 2007).

Heydarpour and Ghaderzadeh, in a research, conducted a comparative study on the adjusted economic value added and the earnings per share in explaining stock returns in Tehran Stock Exchange during a 4-year period from 2001 to 2005.

Darabi and Esfandiari reviewed the relationship between adjusted economic value added, earnings before interest and taxes (EBIT) and cash flow operations with the market value of food industry companies listed in Tehran Stock Exchange during 2003-2007. The study results revealed that with a confidence level of 0.95, the adjusted economic value added and cash flow operations show the same correlation with market values. This is when earnings before interest and tax, compared to two other criteria, are more correlated with stock market values (Darabi and Esfandiari, 2009).

The aim of Rudposhty et al. investigations is evaluating earning information content regarding fluctuations' cycles in earnings and cash flows. Data of 50 firms over the period of 1999 to 2008 was analyzed through using panel method. The results indicate that accounting earnings include some information content. Moreover, information content of accounting earnings has declined in companies with smoother earnings than cash flows (Rudposhty et al, 2010) .

Ghanbari and Moore examined the relationship between economic value added and market value-added for automotive industry companies in Indian stock market during 2001 to 2005. The results demonstrated that the economic value added was a better measure to justify the variations in the market value added of sample firms than the traditional performance measures (Ghanbari &More, 2007).

Circiumaru and Siminica in a paper titled adjusted economic value added a scale to measure company performances, introduced the performance as one of the most important management goals which could, according to the necessity and significance of information perspectives, have different meaning for stakeholders. In this paper, after reviewing the literature on economic value added and adjusted economic value added, a comparative study on these two indicators has been conducted to show the company performance. Results indicated that the explanatory power of adjusted economic value added was more than the economic value in predicting shareholders' wealth (Circiumaru & Siminica, 2009).

Cheng et al examined supplementary role of cash flow operations in explaining stock returns. The purpose of this study was to determine how gain quality affects on earnings role and cash flow operations in evaluating a company. Results showed that yields income similarly explains the cash flow operations account. Moreover, with earnings quality control, the role of income in explaining simultaneous abnormal returns, with better income quality, remains unchanged. Conversely, cash flow operations, when earnings quality is better, explains simultaneous abnormal returns. Also, the market reacts to cash flow operations provide earnings quality. The findings revealed that earnings quality scales will influence on supplementary role of cash flow operations through controlling cash flow operations (Cheng, et al., 2013).

METHODOLOGY

This research is practical in its goal and cross-correlation in its performing method. A 5-year period analysis (2007-2011) was performed on the data obtained from Tehran Stock Exchange (population). Due to the continuity of the activity during the study period, consistency of reporting date to remove seasonal effects, except for investing and mediating companies, was chosen with sampling method of systematic deletion. Applying this, volume of the selected sample reached to the number of 90 companies in Tehran Stock Exchange.

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RESEARCH VARIABLES

In this study, independent variables (net income and cash flow operations) have been extracted from profit, loss and cash flow statements of the companies under study.

DEPENDENT VARIABLES

• **Refined Economic Value Added:** Refined Economic Value Added is an analytical framework for evaluating operational performance and the amount of value created for shareholders (Basidor et al, 1997):

Refined value for period t is expressed as follows:

$$(1) REVA_t = NOPAT_t - WACC (MCAPITAL_{t-1})$$

Where:

$NOPAT_t$ = Net operating profit after tax at the end of period t

$WACC = k_w$ = Weighted average cost of capital

Total investment cost is the weighted average cost of capital components in which the coefficients used for each component are the amount of each component comparing to the total amount of capital used by the firm.

$MCAPITAL_{t-1}$ = the company's market value at the beginning of period t (end of period $t-1$)

• **Q-Tubini, Simple ratio:** the ratio of simple Q-Tubini, is regarded as one of company performance measurement indicators achieved by the relationship between debt book value plus the market value of company common stock in assets' book value (Leoilen and Bodernot, 1997).

Returntherightsoftheownersofshares = $\frac{\text{Net Income}}{\text{Average salary equity}}$ The rate of return on salary equity in this study is calculated as follows (Dote and Dotoit, 2007):

$$(2) (ROE)$$

CONTROL VARIABLE

A Quality control of profit agent to calculate the modified Jones model by considering performance level offered by Kothari et al (2005) has been used:

• **Discretionary Accruals (DAC):** To determine discretionary accruals, which are scales of measuring earnings quality, a modified version of Jones' performance model considering level of performance (Modified Jones model with Return on Assets (MJROA) (Kothari et al., 2005) has been used. This model was presented by Kothari et al (2005). In this model, first the total accruals (TAC) for each period are calculated as follows. To estimate discretionary accruals for annual net, the cash flow from operating activities (CFO) are deducted from net income (NI):

$$(3) TAC_{i,t} = NI_{i,t} - CFO_{i,t}$$

Then, using the modified Jones operating model, we attempted to estimate the non-discretionary accruals of that period ($NDAC_{i,t}$).

$$(3) NDAC_{i,t} / TAI_{i,t-1} = a (1 / TAI_{i,t-1}) + b (\Delta REV_{i,t} / TAI_{i,t-1}) + c (PPE_{i,t} / TAI_{i,t-1}) + d (ROA_{i,t} / TAI_{i,t-1})$$

In the above model $TAI_{i,t-1}$ is the total of assets in the first period, $\Delta REV_{i,t}$ is income changes minus accounts receivable changes, $PPE_{i,t}$ is the gross amount of properties and equipments, $ROA_{i,t}$ is the return rate of assets and a, b, c, d are model coefficients.

Modified Jones model to estimate model coefficients is as follows:

$$TAC_{i,t} / TAI_{i,t-1} = a (1 / TAI_{i,t-1}) + b (\Delta REV_{i,t} / TAI_{i,t-1}) + c (PPE_{i,t} / TAI_{i,t-1}) + d (ROA_{i,t} / TAI_{i,t-1}) + \epsilon_t$$

Finally, the amount of discretionary accruals ($DAC_{i,t}$) estimated from the total difference between discretionary accruals and non-discretionary accruals of each year based on the modified Jones model is calculated as follows:

$$DAC_{i,t} = TAC_{i,t} - NDAC_{i,t}$$

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In the above equation $DAC_{i,t}$ is for discretionary accruals, $TAC_{i,t}$ for total accruals and $NDAC_{i,t}$ is for non-discretionary accruals.

Following the quality rate of company profits has been determined, a dummy variable was used. Since the right skewness of quality data distribution, the central median index was used to classify the quality of earnings. In this way, for firms with higher earnings quality than the median, the dummy variable was considered equal to one and for firms with lower earnings quality than the median; the dummy variable was equal to zero.

- Company size $Size_{it}$

One of the aspects that can affect the amount of discretionary accruals is the size of the company. The results of a study conducted by Lee and Mand (2003) suggested that there is a positive relationship between the firm size and profit increasing discretionary accruals. Therefore, firm size was introduced as a control variable in research models. In this study, the logarithm of assets is considered as the symbol of company size.

$Size_{it}$: the size of company i in the year t , which is equal to the logarithm of assets at the end of the sample period.

- Financial leverage: $LEVERAGE_{it}$.

It is a control variable for firm i in the year t , which in this study, is defined as total debt to total assets at the end of the period.

FINDINGS

First, the relationship between net income (EARN) and Economic, financial and market operating criterion variables are examined; and the research hypotheses, using correlation and regression equations, are investigated through panel data. Then, by entering Wang Z test and cash operating variable, the variable operational increasing content is tested.

Descriptive statistics of the variables are initially presented; and then, research hypotheses are tested.

Table 1: Descriptive statistics of variables

Title	EQ	LEV	SIZE	EARN	OCF	Q	ROE	REVA
Average	0.461538	1.712022	26.37387	329370.6	460143.1	1.31629	57.1281	188911.7
Median	0	1.33	26.18	52181	46344	1.07	29.56	222.86
Maximum	1	61.57	31.02	9946055	14519433	3.6	11207.67	13210329
Minimum	0	-53.88	22.46	-1098702	-8373572	0.04	-177.9	-6447776
Standard deviation	0.499067	5.366407	1.604648	1115965	1612841	0.533001	526.8793	1251148

Descriptive statistics are presented in Table 1. Generally, descriptive statistics suggest the high diversity of the selected sample. For example, descriptive statistics related to company's economic performance benchmark show maximum and minimum equals 13210329 and -6447776, respectively; with a standard deviation equals to 125,148. The other variables have such features implying a variety of selected companies and therefore the ability to generalize sample results to the research community.

ANALYSIS OF THE FIRST HYPOTHESIS

The first hypothesis: in explaining company's financial performance, cash flow operations in comparison to net income possess increased content information. The hypothesis, regarding studying incremental information content of cash flow operating CFO as to net earnings (EARN) in explaining the company's financial performance (ROE), has been proposed and tested using the following model:

$$(1) ROE_{i,t} = \alpha_i + \alpha_1 EARN_{i,t} + \alpha_2 EQ_{i,t} * EARN_{i,t} + \alpha_3 LeV_{it} + \alpha_4 Size_{it} + \varepsilon_{i,t}$$

$$(2) ROE_{i,t} = \alpha_i + \alpha_1 CFO_{i,t} + \alpha_2 EARN_{i,t} + \alpha_3 EQ_{i,t} * EARN_{i,t} + \alpha_4 LeV_{it} + \alpha_5 Size_{it} + \varepsilon_{i,t}$$

The first model is tested; and then, the cash flow operating (CFO) enters the model to examine that whether the cash flow operating (CFO) along with net profit (EARN) and indeed informational content of explanatory variables altogether is bigger than one variable alone or not?

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According to the third chapter and the combinational nature of research data, first the F test (Chow test) is administered in order to select from two alternative ways of estimating models: Pooling and Panel. The first model test results are presented in Table 4.

Table 4: Analysis of Model 1 The first hypothesis

Estimation period: 2007-2011					
Cross-section fixed (dummy variables)					
Adjusted coefficient of determination		0.677167			
Statistics f		11.02426			
Probability		0			
Durbin-Watson statistics		1.900167			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	4.57E-05	1.23E-05	3.7093	0.0002	99%
EARN*EQ	4.42E-05	1.17E-05	3.77676	0.0002	99%
LEV	0.569088	0.311033	1.829674	0.0681	Not significant
SIZE	2.381598	1.005425	2.368749	0.0184	95%
C	-15.094	25.83042	-0.58435	0.5594	Not significant

According to the F statistics and its associated probability, it can be concluded that the regression equation was significant at 99% confidence level. The results of model Durbin - Watson (lack of autocorrelation error terms) test indicates the relative independence of data.

Model adjusted determination coefficient expresses the amount of relevance between independent variables and dependent variable (company's financial performance). According to table 4, model adjusted determination coefficient is 0.67. Thus, on average, 67% of the variability can be explained by this model. Due to the probability of net income (EARN) and multiplying net income and earnings quality (EARN) variables, which is less than 0.01 ,so these variables are significant at the confidence level of 99% in the model; as a result of net income variables (EARN) and multiplying net income and earnings quality (EARN), there is a significant relationship between the variables in the model; on the other hand, since the positive coefficient of those variable ; then, the relationship between net variables(EARN) and multiplying net income and earnings quality (EARN)is direct with the company's financial operating standard (ROE) that is with increasing net income, and earnings quality of firms with high profits, the company's financial operating standard(ROE) increases as well; and by reducing, the company's financial operating standard (ROE) decreased, too. Among the covariates, financial leverage and firm size were more likely than 0.05 and less than 0.05, respectively; and therefore, the firm size at 95% of model is significant; whereas, the financial leverage variable is not significant in the model. But on examining the increasing content of cash flow operating (CFO) in explaining the company's financial operating standard (ROE), this variable was added to Model 1 and tested through Model 2:

Test results of the second model are presented in Table- 5.

Table 5: Analysis of Model 2, the first hypothesis

Estimation period: 2007-2011					
Cross-section fixed (dummy variables)					
Adjusted coefficient of determination		0.783188			
Statistics f		12.71252			
Probability		12.71252			
Durbin-Watson statistics		0			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	3.11E-05	1.32E-05	2.361419	0.0187	95%
EARN*EQ	3.61E-05	1.29E-05	2.80249	0.0053	99%
OCF	1.36E-05	2.73E-06	4.98587	0	99%
LEV	0.51762	0.401844	1.288267	0.1985	Not significant
SIZE	4.789717	0.949811	5.042812	0	99%
C	-81.1817	24.99515	-3.2479	0.0013	99%

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Model adjusted determination coefficient represents the degree of relevance between independent variables and the dependent variable (financial performance). According to Table 5, model adjusted determination coefficient is 0.78. Thus, on average, 78% of the variability is explained by this model. Due to the probability of the net income variables (EARN), multiplying net income by earnings quality (EARN) and cash flow operating (CFO) which is less than 0.01 making these variables significant at the confidence level of 99% in the model; thereupon, there is a significant relationship between the net profit variables (EARN) and multiplying net income by earnings quality (EARN) and cash flow operating (CFO); on the other hand, since model variables coefficients are positive; so, the relationship between net income variables (EARN), net earnings quality (EARN) and cash flow operating (CFO) via the company's financial operating standard (ROE) is direct that is as firms' net income and earnings with high quality profit and cash flow operations (CFO) increase, the financial performance (ROE) increases, too; and with its decrease, the company's financial operating (ROE) decreases. Also, of the covariates, the financial leverage and firm size have the probability of more than 0:05 and less than 0.01, respectively; and hence, the size of the firm at confidence level of 99% in the model is significant, but the variable of financial leverage is not significant in the model.

Following cash flow operating variable (CFO) entrance into the model, the adjusted determination coefficient has been increased; but to determine the significance of the increase and indeed, to review the incremental cash flow operating content in describing the company's financial operating standard (ROE) the Wang Z statistic was used.

The results of the model tests and Wong –Z test are presented in Table 6.

Table 6: Wong Z test results of the second hypothesis

OPERATING STANDARD	MODEL	Z-Wong statistics	Adjusted determination coefficient	probability
Company financial operating standard	Before entering the cash flow operating variable (CFO) to the model	9.452	0.67	0.0013

Given that the significance level of statistic Z-Wong less than 1% is significant at the 99% confidence level, mean that the difference between the models' adjusted determination coefficients is significant and cash flow operating (CFO) as compared to profit in explaining company's financial operating standard (ROE) has incremental information content.

ANALYSIS OF THE SECOND HYPOTHESIS

The second hypothesis: in explaining company's financial operating, the cash flow operating has incremental information content compared to net income. This hypothesis regarding study of cash flow operating (CFO) incremental information content compared to net income (EARN) in explaining company's economic operating (REVA) has been introduced and tested using the following models:

$$(1) REVA_{i,t} = \alpha_i + \alpha_1 EARN_{i,t} + \alpha_2 EQ_{i,t} * EARN_{i,t} + \alpha_3 LeV_{i,t} + \alpha_4 Size_{i,t} + \epsilon_{i,t}$$

$$(2) REVA_{i,t} = \alpha_i + \alpha_1 CFO_{i,t} + \alpha_2 EARN_{i,t} + \alpha_3 EQ_{i,t} * EARN_{i,t} + \alpha_4 LeV_{i,t} + \alpha_5 Size_{i,t} + \epsilon_{i,t}$$

Initially, the first model is tested; and then, the cash flow operations (OCF) enters the model to examine whether the cash flow operating (CFO) plus net profit (EARN), and in fact, the informational content of explanatory variables altogether are bigger than only one variable or not?

The second hypothesis test results for Model 1 are presented in Table 7.

Table 7: Analysis of Model 1, the second hypothesis

Estimation period: 2007-2011					
		Cross-section fixed (dummy variables)			
Adjusted coefficient of determination		0.430994			
Statistics f		4.786671			
Probability		0			
Durbin-Watson statistics		2.068009			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	0.073758	0.032423	2.274874	0.032423	95%
EARN*EQ	0.055632	0.0225	2.47258	2.47258	99%
LEV	-4649.06	1376.24	-3.37809	0.00088	99%
SIZE	-21905	1797.641	-12.1854	0	99%

According to F statistic and its associated probability, it can be concluded that regression equation was significant at 99% confidence level. The results of model Durbin - Watson test (lack of autocorrelation error terms) indicated data relative independence.

Model adjusted determination coefficient implies the degree of independent variables' relevance to the dependent variables (company's economic performance). According to Table 7, model adjusted determination coefficient is 0.43. Thus, on average, 43% of the dependent variables' variations are explained through this model. As the probability of the net income variables (EARN) and multiplying net income by earnings quality (EARN) is less than 0.05, so these variables are significant at the 95 percent confidence level in the model; as a result, there is seen a significant relation between net income variables (EARN) and multiplying net income by earnings quality (EARN) . On the other hand, since model variable coefficients are positive; thus, the relationship between net income variables (EARN) and multiplying net income by earnings quality (EARN) with company's economic operating standard (REVA) is direct. In other words, once net income and firms' earnings with high quality profits increase, the company's economic operating (REVA) also increases; and with its decrease, the company's economic performance (REVA) decreases, too. Covariates, financial leverage, and size of the company have the probability of less than 0.01; therefore, the financial leverage and firm size are significant at the confidence level of 99% in the model.

But on examining incremental content of cash flow operating (CFO) in explaining company's economic performance (REVA), the variables were added to Model 1 and tested through the Model 2:

The second model test results are presented in Table-8.

Table 8: Analysis of Model 2, the second hypothesis

Estimation period: 2007-2011					
		Cross-section fixed (dummy variables)			
Adjusted coefficient of determination		0.499309			
Statistics f		5.726496			
Probability		0			
Durbin-Watson statistics		2.098645			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	0.088414	0.029448	3.002373	0.0029	99%
EARN*EQ	0.041606	0.021046	2.42099	0.0488	95%
LEV	-4584.59	1289.171	-3.55623	0.0004	99%
SIZE	-21309.7	1835.366	-11.6106	0	99%

Model adjusted determination coefficient variable points out the relevancy level of independent variables to the dependent variable (company's economic performance). According to Table 8, the model adjusted

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determination coefficient is 0.50. Thus, on average, 50% of dependent variables' variability is explained by this model. Due to the probability of net income variables (EARN), which is less than 0.01, and the probability related to multiplied net income by earnings quality (EARN) and cash flow operating (CFO) which is less than 0.05, these variables are provided with confidence levels of 99% and 95%, respectively. As a result there is a significant relationship between net earnings variable (EARN) and multiplying of net income by earnings quality (EARN) and cash flow operating (CFO). However, since the coefficients of the variables in the model are positive, the relationship between net income variables (EARN), net earnings with quality profit (EARN) and the cash flow operating (CFO) with the economic performance of firms (REVA) will be direct i.e. by increasing net income, and earnings of firms with quality high profits and cash flow operating (CFO), company's economic performance (REVA) increases and with its decrease company's economic performance (REVA) also decreases as covariates, financial leverage, and firm size have a probability of less than 0.01; therefore, the firm size and financial leverage are significant at the confidence level of 99% of the model.

After entering the cash flow operating variables (CFO) in to the model, the adjusted determination coefficient increased, but the significance of the increase, and indeed, the incremental content of cash flow operating in explaining the company's economic performance standard (REVA) were studied and determined through using Wang Z statistic.

The results of Wong-Z test are presented in Table 9.

Table 9: Wong Z test results of the second hypothesis

OPERATING STANDARD	MODEL	Z- Wong statistic	Adjusted determination coefficient	probability
Company financial operating standard (REVA)	Before entering the cash flow operating variable (CFO) to the model	10.359	0.43	0.0009

Given the significance level is less than 1%, statistic z Wong is significant at the 99% confidence level, meaning that the difference between the models' adjusted determination coefficients is significant and cash flow operating (CFO) compared to the profit in explaining company's economic operating standard (REVA) has an incremental information content.

ANALYSIS OF THE THIRD HYPOTHESIS

The third hypothesis: in explaining the function of the market, the cash flow operations compared to the net profit of possesses incremental information content.

The hypothesis on the study of incremental information content of cash flow operations (CFO) compared to net income (EARN) was introduced in explaining market performance (Q-Tubini_{i,t}) and tested using two different models as follows:

$$(1) Q-Tubini_{i,t} = \alpha_i + \alpha_1 EARN_{i,t} + \alpha_2 EQ_{i,t} * EARN_{i,t} + \alpha_3 LeV_{it} + \alpha_4 Size_{it} + \epsilon_{i,t}$$

$$(2) Q-Tubini_{i,t} = \alpha_i + \alpha_1 CFO_{i,t} + \alpha_2 EARN_{i,t} + \alpha_3 EQ_{i,t} * EARN_{i,t} + \alpha_4 LeV_{it} + \alpha_5 Size_{it} + \epsilon_{i,t}$$

Initially, the model is tested; then, the cash flow operations (CFO) are enters into the model to examine whether cash flow operating (CFO) along with net profit (EARN), and in fact, the informational content of explanatory variables altogether are bigger than one variable alone or not?

The third hypothesis test results for Model 1 are presented in Table 10.

Table 10: Analysis of Model 1, the third hypothesis

Estimation period: 2007-2011					
Cross-section fixed (dummy variables)					
Adjusted coefficient of determination		0.6144			
Statistics f		11.23708			
Probability		0			
Durbin-Watson statistics		1.968075			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	1.53E-08	1.80E-08	0.850261	0.3958	insignificant
EARN*EQ	6.09E-09	3.32E-08	0.183603	0.8544	insignificant
LEV	0.014046	0.001738	8.082032	0	99%
SIZE	-0.0223	0.016194	-1.37717	0.1694	insignificant
C	-81.1817	24.99515	-3.2479	0.0013	99%

According to F statistic and its associated probability, it can be concluded that regression equation was significant at 99% confidence level. The results of the model Durbin - Watson test (lack of autocorrelation error terms) indicate data relative independence.

Model adjusted determination coefficient represents the relevancy amount of the independent variables to the dependent variable (the market performance). According to Table 10, the model adjusted determination coefficient is 0.61. Hence, on average, 61% of the variability of the dependent variables is explained by this model. Due to the probability of the net income variables (EARN) and multiplying net income by earnings quality (EARN) which is more than 0.05, these variables are not significant at the 95 % confidence level in the model; hence, there is no significant relationship between the net profit variables (EARN) and multiplying net income by earnings quality (EARN) with market performance ($Q-Tubin_{i,t}$); while among the covariates, only company's financial leverage has the probability of less than 0.01; therefore, the financial leverage in the model is significant at 99% confidence level.

But regarding the review on incremental content of the cash flow operations in explaining market performance ($Q-Tubin_{i,t}$), the variable is added to the first model and tested through the second model:

Table 11: Analysis of Model 2, the third hypothesis

Estimation period: 2007-2011					
Cross-section fixed (dummy variables)					
Adjusted coefficient of determination		0.622621			
Statistics f		11.50913			
Probability		0			
Durbin-Watson statistics		1.974189			
Explanatory variables	Coefficient	Standard error	Statistics t	Probability	Level of confidence
EARN	1.29E-08	1.79E-08	0.71832	0.4731	insignificant
EARN*EQ	7.58E-09	3.03E-08	0.249607	0.803	insignificant
OCF	5.24E-09	2.05E-09	2.557842	0.011	95%
LEV	0.013949	0.001383	10.08488	0	99%
SIZE	0.01986	0.01685	-1.17862	0.2394	insignificant
C	1.615374	0.439997	3.671327	0.0003	99%

Model adjusted determination coefficient reveals the relevancy level of independent variables to the dependent variable (the market). According to Table 11, model adjusted determination coefficient is 0.62. Thus, on average, 62% of the variability of dependent variables is explained by this model. Due to the probability of the variables net income (EARN), and multiplying net income by earnings quality (EARN) which is more than 0.05 and the probability of the cash flow operations (CFO) which is less than 0.05, then of the above variables, the cash flow operation variables (CFO) at 95% confidence level in the model

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were significant; so, there is only a significant relationship between the cash flow operations (CFO) and market performance ($Q\text{-Tubin}_{i,t}$). On the other hand, since the coefficient of this variable in the model is positive; thus, the relationship between cash flow operation (CFO) and market performance ($Q\text{-Tubin}_{i,t}$) is direct; in other words, increasing cash flow operation (CFO), heightens the market performance ($Q\text{-Tubin}_{i,t}$); whereas, reducing it, lead to decreasing the market performance ($Q\text{-Tubin}_{i,t}$) as well. Also, among the covariates, the financial leverage has the probability of less than 0.01; then, the financial leverage is significant at the confidence level of 99% in the model, too.

According to the results of the third hypothesis and Models 1 and 2, since the profit variable (EARN) is not significant in the models, there is no need to examine the incremental content of cash flow operations.

DISCUSSION AND CONCLUSION

The results showed that operating cash flows compared to net profit in explaining company's financial and economic performance have incremental information content, and by entering this item into regression model of the economic and financial performance scales, models' determination coefficient increases. Based on the obtained results, it is recommended to researchers, analysts and other users of information and decision-makers in the capital market, in predicting the companies' performances, to use this variable along with other effective variables.

Secondary research results demonstrated a significant positive relationship between firm size and financial leverage with financial performance standards. Thus, decision makers and users of market information are advised in reviewing the company's performance to take the positive role of these two variables under consideration.

Likewise, the interaction between earnings quality and profits in explaining firm performance was positive and significant indicating that market is attracted to the quality of earnings and investors are interested in the quality of earnings. Moreover, company managers are also advised, regarding the positive role of earnings quality, to consider improving the quality of earnings presented in the financial reports.

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