

## The study of the effects of market's efficiency level with information content of accounting profit on the evolution of accepted firms in Tehran stock exchange

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**Abstract:** Up to now, in most of conducted researches the relationship between the accounting variables and the firms' stock price, the assumption of market's efficiency has been accepted and the researches have been done in Iran's economic environment according to this hypothesis. The main question of this research is that whether the inefficiency of the existing market causes to creation difference within the results of former researches. Due to answer the mentioned question, four assumptions have been codified in this investigation. The method for doing this research is semi-empirical and the statistical population in this research were Tehran negotiable papers stock market. In order to compute the market inefficiency level of each of the sample firms, there has been used of Hou, et al. research method and then via collins, et al. the initial and developed models were estimated in order to test the research's hypotheses, In order to estimate the mentioned models, the sample companies' data form years 2000 to 2010 were used. The results of hypothesis testing showed that the market inefficiency has a negative effect on the information content of future earnings and future operating cash flow, and it doesn't have any effect on the information content of future accruals and current income and stake holders of enterprises should take note of this.

[Alireza Askarpour, Zahra Rahmati, Ali Bagherifar. **The study of the effects of market's efficiency level with information content of accounting profit on the evolution of accepted firms in Tehran stock exchange.** *J Am Sci* 2012;8(10):432-441]. (ISSN: 1545-1003). <http://www.jofamericanscience.org>. 63

**Key words:** stock exchange, information content of earnings, accruals, operating cash flow.

### Introduction:

In today's economic world and the conditions that each day the economic environment becomes more complex and more ambiguous, investors and other stakeholders are always looking variables and factors which they can use them in their own decisions and steps to take decisions more efficiently with maximum benefit and minimum risk. In this way research in finance research that takes place in the form of a valuable relationship, identify, examine and test the information content and explanatory power of these variables. The study by Ball and colleagues was the first in which the information content of the variable profit and its relationship with stock price change had been tested. In other words, the test results show that the accounting earnings in explaining stock prices have information content. Their research results indicate that the stock price changes in same direction of change in earnings per share, and this result has been confirmed by other researches, that the research done by Halthausen and colleagues (2001) could be cited. Perhaps this is because in the events that the securities react to earnings per share show the same reaction, and may be this is because the earnings per share can provide information on the securities market. After reading Bau and colleagues that has been the basis for many

researchers. Another studies were done in the from of examine the relationship between profitability, other criteria based on income, operating cash flow and other variables with revenue and stock price. In this relation a lot of theories were raised that even lead to important economic statements.

Most studies have a valuable relationship with this assumption that is the job market. Market efficiency has different meanings in different contexts. Foster defines an efficient market, if the information part to be shown in full on the mentioned company's stock price, In other words, we can write that: (1)

$$f(R_i, t, R_j, t, \dots | \varphi_{t-1}^M) = f(R_i, t, R_j, t, \dots | \varphi_{t-1}^M, \varphi_{t-1}^a)$$

In which: The probability distribution function

$R_i, t$ : I firm's stock in week "t"

$\varphi_{t-1}^M$ : The used information part in the time "t-1"

$\varphi_{t-1}^a$ : The special information part which has been available generally in the time "t-1"

In other words, an investor can achieve abnormal returns via  $\varphi_{t-1}^a$ : on the other hand the efficiency of capital market of data can be classified in three categories, that include efficiency in poor performance from, efficiency in semi-strong from, and efficiency in strong from. If the historical information is reflected in stock prices of companies,

it is said that market efficiency is in weak level. If the current released information such as declaring profit, stock splits and paid cash and share profit are seen in stock price, it is said that market is efficient in its strong form.

If all data including historical, current and confidential company data has reflected on stock price, it is said that market is efficient in its strong form. Therefore we can say that the necessity for market efficiency in terms of data and information, is the level of information reflection on stock price and finally is the companies' share efficiency. Typically, studies that examine the information content of accounting variables, assume the full coverage of accounting information on stock price and then the link between accounting variables (such as earnings, book value, cash flows and etc) is being studied with stock price and stock return. But here what should be said is that because of several reasons, accounting information influence on stock price might not takes place immediately and without delay. In this case, assessing the relationship between the variable is not appropriate. Because, on the one hand, the stock price has yet to be released by providing the financial information is unadjusted and on the other hand, the association between information and market variables is considered inappropriate.

This difference is 500 Riyals more or less than the nominal price that represents the measurement error. According to the mentioned cases, we can conclude that the expected benefits and efficiencies are affected by the market performance, this means that if a market is inefficient and, the effect of the published information on market is too little and gradual, and we can't determine the expected return and efficiency precisely and therefore the calculated efficiency of the current period does not have much validity and currency we have to interpret the value relationship studies greatly carefully. In the previous research on market efficiency as an independent variable, it enters to the regression of current output to increase its explanatory and reliability According to the above cases, this study seeks to answer the following questions:

1) Is the current level of information content for future earnings reflected in correct stock returns, related to the level of market efficiency?

2) Is the current level of information content for earnings reflected in current stock returns, related to the market efficiency?

The test of information content is mooted in the two forms of relative information content and increasing information content. The discussion of relative information content is mentioned when the researcher wants to know between two accounting

variables or among several accounting variables, which one has a higher information content than the other variables, so that he/she can achieve a ranking of criteria. On the other hand, in the surveys about the increasing information content of accounting items information, the main goal is to answer the question of whether one or more accounting criteria will add something more than other variables or not?

Earning as the main information source is divided into two parts of cash and accrual that each of them has a separate data content. A company needs cash to continue its operations and company management to make decisions about financial ensuring or investment, needs its own funds, in order to inform of cash flows (incoming and outgoing), this knowledge are provided to management and other users, using cash flow statements cash flow items are items of real and concrete, while the interest accruals item are contract and selective items that can be manipulated and deviated by the management, so it is necessary to test the effect of probable market inefficiency on each of these item individually.

In relation to that two mentioned questions, we examine the increasing content of the two cash and accrual of interest parts in one model. Now we will study the effect of market inefficiency on the relative information content of cash accrual of interest parts by designing the two following questions:

3) Is there any relationship between the reflected information content of the expected cash interest part in the current stock market with market efficiency level?

4) Is there any relationship between the reflected information content of the expected accrual of interest part in the current stock market with market efficiency level?

What we mean by cash part, is the fund provided from operating activities of business unit, and the commitment part of the difference between operating profit and cash is from operating activities, which includes inventory, received accounts and documents and paid accounts and documents.

#### **Background research:**

One of the most important reported financial information by the companies is profit. In fact the investors and many of other users consider the accounting profit data as a main information source for evaluating the firms' performance. Profit is also one of the main factors of stock pricing. In this context, penman and colleagues state that if the accounting profit can predict the future value of the company, it has a high quality.

A lot of researches have been done about the profit information content, it means the relation between profit and the variables such as stock price,

and in most of the conducted researches in this context, the assumption of the efficient market has been accepted in its semi- strong form. Which if market are not efficient enough we're supposed to be, then we have to review the way we interpret the results relevant to information content studies. Nevertheless, the researchers has not paid enough attention to the efficient content researches.

For the first time Aboody and colleagues have studied the effect of market efficiency on the information content of accounting variables. They define the market efficiency level in the amplitude that the stock price reflect its innate value. This means that if the stock price doesn't reflect the intrinsic value of it, the market is in efficient. They use the discounting way of cash flows associated with future sharing profit to calculate the intrinsic value of stock. They deduce that if market failures and low performance is improved over time, according to the future balanced risk and price variations, its effect will balance the current stock price. These adjustment procedures are applied to three information contents tests, which include:

1) Earnings and book value, 2) Residual income, 3) Cash and accrual profit. Generally the empirical findings showed that the bias adjustment procedure reduces the estimating coefficient in the regression of information content, provided that market inefficiency affects the information content of accounting information. Fama and French claim that yield's irregularity and non-influence from the gains might be related to the risk factors, while Lakonsnok and Colleagues point out that this irregularity is because of market inefficiency. Moreover Halthausen and Colleagues state that in order to examine the accounting information effect on the frims' stock price, first one should determine whether or not market process and analyses the aforesaid information?

Zarif Fard and Nazemi conducted a research as the examine of potential market inefficiency role in the relations between accounting variables and the accepted frims' stock price and yield in Tehran stock exchange. In an inefficient market, the intrinsic value of the frims' stock is measured with error. This level of error makes a difference between the nominal price and the intrinsic value. Assuming that this delay will over during the time, one can expect that the coefficients of the explanatory variables in stock price and yield such as dividend, stock returns, accounting earnings and book value will increase with the passage of time and eliminating the information time delay. The results of this research show that during the 24 month after ending the financial period of frims, earnings coefficients and

book value increase and it is statistically significant. On the other hand we can't achieve clear results while we are examining the cash and accrual components and the impact of market mal performance.

#### **Research hypotheses:**

In order to of study the effect of market inefficiency on the profit information content, the following hypotheses were selected and edited:

First hypothesis: Market efficiency level has a significant impact of the information content of the future earning reflected in the return on equity.

Second hypothesis: Market efficiency level has a significant impact on the information content of the current earnings reflected in the current return on equity.

Third hypothesis: Market efficiency level has a significant impact on the information content of cash of the future earnings reflected in the current return equity.

Fourth hypothesis: Market efficiency level has a significant impact on the information content of accrual of future earnings reflected in the current return equity.

#### **Research Method:**

In order to study the research methods, Collins and colleagues' approach has been used. This has examined the relationship between stock return with the future period earning, and it show how the future period earning data reflect in the current stock price changes. Collins and Haribar's approach is preferred because of these two reasons to estimate the relationship between current earnings and future periods.

First of all this approach will examine both the direct role (using the earnings to predict the future periods earnings) and indirect role (combining the earnings information with the information of other information sources to predict the future periods earnings) of the detected earnings via the stock price. Secondly changes in the future periods earnings might be because of the events which don't affect the current year's earnings but it will reflect on the current stock price.

Therefore in this part, the dependent and independent models and variables used to calculate inefficiency and also dependent and independent models and variables used to test research hypotheses, are described. In order to test the research hypotheses, the financial information of companies during the years (from 2000 to 2006) has been used.

#### **Measure of market inefficiency:**

Several factors such as lack of sufficient data and information asymmetry, irrational and

unreasonable decisions of investors cause to market inefficiency. In an inefficient market price are faced with delays. In other words information affect stock price slowly. So the real value of stock is not equal to its intrinsic value and it has measurement error. Hou and Colleagues' method has been used to compute the degree of market inefficiency. So two regressions have been used. In the first regression, the weekly return of each company on the market return in the same week and four delayed market returns are studied and in the second regression, the weekly return of each company is only studied on the market return in the same week. The two mentioned regressions are described as follows:

Model one:

$$R_{it} = \alpha_1 + \beta_{it} R_{m,t} + \sum_{i=1}^4 \lambda^{(-n)} R_{m,t-n} + \varepsilon_t$$

Model two:

$$R_{it} = \alpha_1 + \beta_{it} R_{m,t} + \varepsilon_t$$

R<sub>i,t</sub>: I company return in week t

R<sub>m,t</sub>: market return in week t

R<sub>m,t-n</sub>: market return in week t-n

The reaction speed of stock price to the market information can be measured with the regression coefficients of the mentioned equations. For example for one part with a high reaction speed to the market information, ( $\beta_i$ ) coefficient is significantly different from zero (in this case there is no price delay and information affect the stock price rapidly), But the delayed coefficient  $\lambda_i^{(-1)}$ ,  $\lambda_i^{(-4)}$ ,  $\lambda_i^{(-3)}$ ,  $\lambda_i^{(-4)}$  must be near to zero and for one part with a low reaction speed to the market information, the coefficient ( $\beta_i$ ) must be small or in order words may be unimportant and one or some of the delayed coefficient must be different from zero significantly. For every year the degree of price delay of each firm is computed by the first and second models, that its relation is as follows:

Model 3:

$$0 < D < 1 \quad D = 1 - \frac{R^2_{equation2}}{R^2_{equation1}}$$

If the price of one share reacts to the market information, D will be much larger, (it means that, it is much nearer to one) because the main part of stock return is defined with delayed returns of market. If one share reacts rapidly to the market news, D will be much smaller (next to zero), because a partial part of the stock return is defined with market delayed returns, and the main part of it is defined via market current returns.

#### Research models:

As noted before, Collins and colleagues' approach was used in this study. Contractual framework of the mentioned approach is using the theoretical findings of the discounted cash flow

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valuation model and its application in the relationship between earnings and return. This approach states the relationship between earnings and return via the following regression model:

Model 4:

R<sub>t</sub>: annual stock return before dividends for the year t.

X<sub>t</sub>: the reported earnings for the reported earnings for the year t.

UX<sub>t</sub>: the different between the reported earnings for the year t and the expected earning in the initial part of the same period.

$\Delta E_{t(xt+k)}$ : change in the existing expectations from the future years earnings.

B<sub>i</sub>: earnings response coefficients.

$\beta_{k+1}$ : the relation between the current stock return and company's future earning for the year t+k.

this equation means that the current period return is defined with unexpected earning of the current period and the accumulated changes in stake holders' expectations for the future earnings. Since the earnings expectations of investors is invisible, performing this model requires using a series of appropriate ultimate alternatives Collin and Colleagues used the earnings reported in year t-1 as the expected part of UX<sub>t</sub> and for  $\Delta E_{t(xt+k)}$  they used the earnings reported in year t+k, as the annual expected earnings and they used the last year earnings as the current year expected earnings.

In order to eliminate the error problem in variables related to UX<sub>t+k</sub>, they enter the future returns (R<sub>t+k</sub>) into the equation. The logic behind this is that an unexpected shock (new information) to the benefit of future returns also affect the future period earnings.

Entering future returns into the regression of the unexpected part, controls the future profits (measurement error). Lunnholm and Colleagues added the earning sum of the next three years under variable and total return consisting the next three years as R<sub>t3</sub> to the above regression:

Model 5:

$$R_{it} = b_0 + b_1 X_{t-1} + b_2 X_t + b_4 X_{t+3} + b_4 R_{t3} + \varepsilon_T$$

In which:

R<sub>t</sub>: stock return for year t.

X<sub>t</sub>: the benefit of each share for year t, that is balanced via the stock price in the beginning of the year t.

X<sub>t3</sub>: the total profit in years t+3,t+2,t+1

R<sub>t3</sub>: the accumulated stock return from year t+3 to t+1

The above equation is the one that will test the effect of market efficiency on the relationship between the return and future earnings, the current earning, accruals and the cash items. Sun young

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added the market inefficiency and its reaction with the existing independent variables to the above relation and provided model (6)

Model 6:

$$R_{it} = b_0 + b_1 X_{t-1} + b_2 X_t + b_3 X_{t3} + b_4 R_{t3} + b_5 D_t + b_6 D_t * X_{t-1} + b_7 D_t * X_t + b_8 D_t * X_{t3} + b_9 D_t * R_{t3} + \epsilon_t$$

In which:

$R_t$ : stock return for the year t.

$X_t$ : the benefit of each share for year t, the benefit of each share for year t is balanced.

$X_{t3}$ : total benefit in years t+3, t+2, t+1

$R_{t3}$ : the accumulated stock returns from year t+1 to t+3

$D_t$ : the criterion of market efficiency is ( $0 > D > 1$ ).

If the criterion of market inefficiency distort the relationship between current stock returns and the future profit and the current earnings, the coefficients  $X_t, D_t, X_{t3}, D_t(b_8)$  will be negative, and if they improve the aforesaid relation, the mentioned coefficients will be positive.

Although benefit is positively related to the cash flow from operating activities, but the most important variable in stock evaluating is predicting the operating cash flow. So important is the question of whether market inefficiency increase the cash flow predictability arising from the operating activities or decrease it. Therefore the third research hypothesis was formulated. To study this hypothesis, the existing profit model (6) was divided into two cash and accrual parts.

After the profit split into the two mentioned parts, model (6) has a form like the relation (7):

Model (7):

$$R_t = b_0 + b_1 CFO_{t-1} + b_2 CFO_t + b_3 CFO_{t3} + b_4 ACC_{t-1} + b_5 ACC_t + b_6 ACC_{t3} + b_7 R_{t3} + b_8 D_t + b_9 D_t * CFO_{t-1} + b_{10} D_t * CFO_t + b_{11} D_t * CFO_{t3} + b_{12} D_t * ACC_{t-1} + b_{13} D_t * ACC_t + b_{14} D_t * ACC_{t3} + b_{15} D_t * R_{t3} + \epsilon_t$$

In which:

$CFO_t$ : the cash part of profit in year t.

$ACC_{t3}$ : the total cash parts of profit in years t+3, t+2, t+1

$ACC_t$ : the accrual part of profit for year t

$ACC_{t3}$ : the total accrual parts of profit in years t+3, t+2, t+1

If the market inefficiency decreases the information content of cash flow arising from the future operating activities,  $b_{11}$  must be negative, otherwise, it would be positive.

In order to examine and test the fourth hypothesis, also model (7) was used. Negative  $b_{14}$  indicates that market inefficiency will decrease the future accruals predictability and if its coefficient is positive, it means that market inefficiency will

increase the information content of the future accruals. For homogenization of data, accrual earnings and cash flow arising from the operating activities are divided by the beginning period of the company's market value. Moreover the effect of earnings stability control variables (persist), the size of company, opportunities for growth (BM) systematic risk ( $\beta$ ) on the results of above tests, are tested in this study in the form of model (8)

Model (8):

$$R_t = b_0 + b_1 X_{t-1} + b_2 X_t + b_3 X_{t3} + b_4 R_{t3} + b_5 D_t + b_6 D_t * X_{t-1} + b_7 D_t * X_t + b_8 D_t * X_{t3} + b_9 D_t * R_{t3} + b_{10} Control_t + b_{11} Control_t * X_t + b_{12} Control_t * X_{t3} + b_{13} Control_t * R_{t3} + \epsilon_t$$

The size of company (size): in order to compute the variable of size of company, there are many indexes such as logarithm of the market value, logarithm of the net asset and logarithm of the book value. In this study logarithm of the market value, the owners rights of company stock at the end of year as the index of size of company have been used, because it is a general criterion that is gained in the market and it is based on the current values. Systematic risk ( $\beta$ ): beta is reprehensive for the systematic risk. For each company, this number was computed by the use of market model for the estimates for the early return. To estimate beta, the company efficiencies on the whole index are used:

$$R_{it} = \alpha_0 + \beta_{it} R_{mt} + \epsilon_t$$

$R_{Mt}$ : indicates the total market return for period t

Earnings stability: to measure the stable earnings, Lunnholm and Colleagues' method has been used, which is as follows:

$$Persist = (EPS_{it} / EPS_{it-1}) / (EPS_{it-1} / EPS_{it-2})$$

Community and statistical sample: the statistical community of this research are all of the accepted companies in Tehran stock exchange which had been active in stock from 1997 2010. In this research to select the statistical sample, first the existing companies in the statistical community were examined and the companies which didn't have the following features were eliminated from the sample:

- 1- The company should not be in the financial intermediation companies.
- 2- The company's fiscal year end is March is and it didn't change its fiscal year during the years from 2000 to 2009.
- 3- Trading is not interrupted for more than 6 months.
- 4- The required data for company is available in the processing policy database or in the stock exchange database. By applying the four above features, 52 companies were selected as the statistical samples.

Descriptive statistics of the research's variables:

Table (1) provides the descriptive statistics related to 324 year observations of the company. The first five rows, shows the research’s first model variables. Accruals (ACC) and cash flow arising from the operating activities (CFO) are the variables that were used in the developed model. D is the measure of market inefficiency and the last four rows are some

information about the control variables. The main variables in this research include the profit of each share (homogenized according to the early market price), delayed profit of each share, the accumulated profit for three years, the operating cash flows and accruals of profit (homogenized according to the early market price)

Table (1): Descriptive statistics of the variables for 324 company’s observations in the year.

Coefficient of Variation	Criterion deviation	minimum	maximum	median	average	variable
2/01	0/652	-0/945	2/891	0/168	0/323	Ret
0/823	0/135	-0/354	0/835	0/139	0/164	X <sub>t</sub>
0/796	0/127	-0/365	0/728	0/127	0/159	X <sub>t-1</sub>
0/762	0/356	-0/413	1/324	0/413	0/465	X <sub>t3</sub>
0/843	0/752	-0/824	3/852	0/923	0/892	R <sub>t3</sub>
1/229	0/134	-0/634	1/146	0/0835	0/109	CFO <sub>t</sub>
3/312	0/165	-0/945	0/8661	0/0323	0/0498	ACC <sub>t</sub>
0/232	0/09562	0	1	0/346	0/4111	D <sub>t</sub>
0/642	0/1782	0/004	2/972	0/15028	0/277	BM
1/20	0/7533	-0/829	3/439	0/3201	0/623	β
0/119	1/490	9/620	16/833	12/465	12/490	SIZE
0/183	0/125	-1/324	2/415	0/834	0/963	PER

**Research findings:**

The results obtained from estimating model (5) are showed in table (2). As one can see in table (2), the accountability factor of profit equals to 0.928 (t=2, 241)

That means the reliability level is 95%. Moreover the accountability factor of future profit is 0.563 (t=4, 52) that means the reliability level is more

than 99%. These results show that there is a positive relationship between the future earning and the future dividing earning and company’s value.

The negative factor of future returns show that the determined future profit include measurement errors, that entering future returns effectively eliminates the problem of errors in variables.

Table (2): the results of estimating model CKSS

R <sub>t</sub> = b <sub>0</sub> + b <sub>1</sub> X <sub>t-1</sub> + b <sub>2</sub> X <sub>t</sub> + b <sub>3</sub> X <sub>t3</sub> + b <sub>4</sub> R <sub>t3</sub> + ε <sub>t</sub>					
description	b.	X <sub>t-1</sub>	X <sub>t</sub>	X <sub>t3</sub>	R <sub>t3</sub>
Differential factor	0/142	-0/519	0/928	0/563	S-0/196
statistic	5/529	-3/367	2/241	4/52	-3/638
Error level	0/012	0/000	0/017	0/000	0/000
F=8/61 F(p-value)=0/000 R <sup>2</sup> =0/596 Adj R <sup>2</sup> =0/547 dw=1/642					

**The results of hypothesis testing:**

The first hypothesis of the study is to answer the question whether the information content of market inefficiency affects future profit and whether this effect is negative or positive? What answers this question is the mark of factor b<sub>8</sub> in model (6). The results obtained from the mentioned model estimation are summarized in table (3). As one can

see in table (3) the variable factor equals -0.820 (t= -4.475) that its reliability level is more than 99% and its mark is negative. The negative coefficient means that the potential market inefficiency decrease the returns ability to predict future profit s, in other words, the potential market inefficiency has a negative impact on the information content of future profits. Therefore there are not enough vouchers to

deny H hypothesis and the first hypothesis of this research will be accepted. The second hypothesis of the research examined the relationship between the information content of the current profits reflected in the current stock return with market efficiency. Based on the second hypothesis if factor  $b_7$  in model (6) is negative, market inefficiency, decrease the return's ability in prediction, and if it is positive, it increase the predictability power of profit, the results of the second hypothesis testing are provided in table (3). As one can see in table (3), differential factor  $D_t * X_t$

equals to  $t = -0.105 - 0.570$  that its reliability level is not 95%. The results indicate that the potential inefficiency of the market doesn't affect the profit's information content. So hypothesis  $H_1$  will be accepted and the second hypothesis will be denied. It seems that in Iran's capital market, the role of the potential market inefficiency in the relation between current return and the future profits is not equal with its role in relation between the current return and current profit.

Table (3): the results of estimating the first model of research

Error level	Statistic t	Differential factor	Titles of variables
0/041	2/111	0/132	Original latitude
0/000	-3/651	-0/630	$X_{t-1}$
0/016	2/422	1/212	$X_t$
0/000	4/880	1/076	$X_{t^r}$
0/004	-2/926	-0/172	$R_{t^r}$
0/043	2/041	0/062	$D_t$
0/003	2/956	0/345	$D_t * X_{t-1}$
0/105	-1/605	-0/57	$D_t * X_t$
0/000	-4/475	-0/82	$D_t * X_{t^r}$
0/118	1/57	0/169	$D_t * R_{t^r}$

$F=7/493$     $F(p\text{-value})=0/000$     $R^2=0/512$     $Adj R^2=0/48$     $DW=1/845$

The third hypothesis of this research examines the relationship between the information content of the future profit cash part reflected in the current stock return with the level of market efficiency. Based on the third hypothesis of the research, if  $b_{11}$  is negative, market inefficiency has a negative impact on the cash flow's predictability arising from the future operating activities. The results from testing the third hypothesis are provided

in table (4) by using the developed model of model (7). As one can in table (4) the differential factor  $D_t * CFO_{t3}$  equals to  $t = -3.651$ , that its mark is negative and its reliability level is 99.9%, the negative mark of this coefficient means that the potential market inefficiency decreases the return's ability in predicting the future cash flows. Therefore there are not enough vouchers to deny hypothesis H. and the opposite hypothesis will be accepted.

Table (4): the results of the researchs developed model

Error level	Statistic t	Different factor	The title of variables
0/000	5/439	0/112	Original latitude
0/000	-4/765	-1/506	$CFO_{t-1}$
0/013	2/504	0/964	$CFO_t$
0/0293	2/156	0/450	$CFO_{t^r}$
0/000	-3/427	-0/963	$ACC_{t-1}$
0/001	3/341	0/914	$ACC_t$
0/253	1/146	0/181	$ACC_{t^r}$

0/824	-0/220	-0/023	R <sub>t</sub> <sup>r</sup>
0/018	-2/38	-0/181	D <sub>t</sub>
0/001	3/525	0/534	D <sub>t</sub> * CFO <sub>t-1</sub>
0/023	-2/342	-0/544	D <sub>t</sub> * CFO <sub>t</sub>
0/000	-3/651	-0/212	D <sub>t</sub> * CFO <sub>t</sub> <sup>r</sup>
0/010	2/612	0/478	D <sub>t</sub> * ACC <sub>t-1</sub>
0/068	-1/835	-0/452	D <sub>t</sub> * ACC <sub>t</sub>
0/781	-0/278	-0/050	D <sub>t</sub> * ACC <sub>t</sub> <sup>r</sup>
0/936	0/080	0/009	D <sub>t</sub> * R <sub>t</sub> <sup>r</sup>
F= 8/ 61    p-value = 0/000    R <sup>2</sup> =0/596    Adj R <sup>2</sup> =0/547    DW=2/124			

The fourth hypothesis of this research examines the relationship between the information content of future profit s cash part reflected in the current stock return with the market efficiency level. Based on the fourth hypothesis if the factor b<sub>14</sub> is negative, market inefficiency decreases the future accruals predictability. As one can see in table (4), the different factor of the future accruals ACC<sub>t3</sub>, equals to 0.181 (t= 1.146) and the differential factor of future accrual depending on the market efficiency level D<sub>t</sub>\* ACC<sub>t3</sub>, equals to 0.050 (t= -0.278) that statistically is not significant. It means that future accruals don't have any information content to describe the current return, and the potential market inefficiency doesn't have a significant role in the impact acceptability of the current return from the accruals, so H<sub>1</sub> hypothesis is accepted and the fourth hypothesis is denied.

**The test of control variable test:**

In the past studies, researchers applied several variables to test the profit s responding factor. May be the results from parts before because of the elimination of these variables. In order to remove uneasiness, we will study the impact of some of the variables that can be impressive on the relation between profit and return. The results from testing control variables, i.e. the size of company, systematic

risk (β), the relation between book value and market value(BM) and profit stability (persist) are provided in table (5). By entering the size of company s control variables, growth of company, systemic risk and profit stability, the coefficient D<sub>t</sub>\* X<sub>t3</sub> and test statistics equals to ( t= -2.723)- 0.611, (t= -4.471)- 3.51, (t= -4.631)- 0.342, (t= -3.849)- 0.716, respectively that in all of them the responding factor of the future profit are negative and significant. Therefore the first hypothesis is proved by applying all of the control variables. By entering the control variables, the size of company, growth of company, systematic risk and profit stability, the coefficient D<sub>t</sub>\* X<sub>t</sub>, test statistics are (t= 0.638), 0.131, (t= -0.740) - 0.355, (t= -0.574)- 0.142, (t= -1.110)- 0.281, respectively, that in all of them the responding factor of the future profits is meaningless. So the second hypothesis is also denied by considering all of the control variables, and the results of the main model is confirmed. Generally the results show that entering control variables doesn't have any impact on the testing hypotheses results and the same results obtained from previous parts are confirmed. It means that about all of the control variables, the coefficient D<sub>t</sub>\*X<sub>t3</sub> is negative and significant and the coefficient D<sub>t</sub>\*X<sub>t</sub> is meaningless.

Tables (5): testing control variables

$R_t = b_0 + b_1 X_{t-1} + b_2 X_t + b_3 X_t^r + b_4 R_t^r + b_5 \Delta D_t + b_6 D_t * X_{t-1} + b_7 D_t * X_t + b_8 D_t * X_t^r + b_9 D_t * R_t^r + b_{10} Control_t + b_{11} Control_t * X_t + b_{12} Control_t * X_t^r + b_{13} Control_t * R_t^r + \epsilon_t$				
Persist	BM	β	SIZE	Title of variables
0/092 (3/185)	0/032 (2/038)	0/097 (3/327)	0/157 (2/949)	Original latitude

-0/084 (-0/476)	-0/402 (-2/146)	-0/288 (-1/519)	-0/346 (-2/005)	$X_{t-1}$
-0/068 (-0/833)	0/913 (2/267)	0/793 (2/703)	0/925 (3/112)	$X_t$
0/867 (5/373)	0/568 (5/118)	0/767 (5/373)	0/713 (1/989)	$X_{t^3}$
-0/118 (-0/505)	-0/382 (-2/706)	-0/336 (-3/026)	0/358 (0/543)	$R_{t^3}$
-0/196 (-1/322)	0/049 (3/349)	-0/152 (-1/221)	-0/197 (-1/348)	$D_t$
-0/291 (-2/451)	0/332 (1/450)	0/366 (1/645)	0/228 (1/452)	$D_t * X_{t-1}$
0/131 (0/638)	-0/355 (-0/740)	-0/142 (-0/574)	-0/281 (-1/110)	$D_t * X_t$
-0/611 (-2/723)	-0/351 (-4/471)	-0/342 (-4/631)	-0/716 (-3/849)	$D_t * X_{t^3}$
0/146 (1/471)	0/173 (1/604)	0/139 (1/889)	0/158 (1/460)	$D_t * R_{t^3}$
-0/378 (-2/977)	0/163 (3/661)	0/102 (2/252)	-0/005 (-2/658)	Control
0/859 (2/831)	-0/074 (-0/792)	0/088 (2/004)	0/102 (0/882)	Control * $X_t$
0/346 (4/566)	0/280 (1/911)	-0/121 (-2/629)	0/009 (3/107)	Control * $X_{t^3}$
-0/108 (-0/962)	-0/093 (-0/796)	-0/049 (-0/009)	-0/0408 (-1/519)	Control * $R_{t^3}$
10/165	6/406	7/568	7/178	f
0/513	0/479	0/607	0/515	R <sup>2</sup> تعديل شده
1/920	1/736	1/845	1/904	DW

The numbers and within the parenthesis are t statistics.

### Conclusion and presenting suggestions:

By considering the market efficiency variable, the responding coefficient of the future profits is significantly negative. The results show that if a company face with an important information inefficiency, this inefficiency will hide the information within future earnings.

Therefore based on the effect of the potential market inefficiency on the information content of the future

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earnings, the first hypothesis of the research, will be accepted. For testing the second hypothesis of research we must pay attention to the accountability factor of the current profits by applying the factor of potential market inefficiency. The results indicated that the potential market inefficiency doesn't affect the information content of profit. It seems that the role that potential market inefficiency plays in relation between the current return and the future

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earnings is not equal with the role that it plays in relation between the current return and the current earnings, and the intensity of the potential inefficiency causes that the current return's dependency to the current profit becomes more, and the related news to the current profits becomes more related. Therefore the second hypothesis based on the no effect of potential market inefficiency on the information content of profit will be denied. The regression coefficient of the future cash flows by applying the factor of potential market inefficiency is significantly negative. Prediction of cash flows is of great importance, because most of the pricing models of stock are decreased based on the cash flows. The market inefficiency causes that information related to the cash flows enters to market with delay, so predicting them becomes difficult. Therefore inefficiency effect on the information content of future cash flows and can could be misleading to investors and analysts and finally leads to non optimum allocation of sources, so the third hypothesis of research, we must pay attention to the accountability factor of future accruals by applying the potential market inefficiency. As one can see in table (4), the mentioned factor is negative but it is totally meaningless. The accruals are the items that are within the management jurisdiction, allow the management to flatten the profit, it means that the managers of a trading unit while respecting the accounting standards, can select several ways for computing to report the profit based on the their own pleasant company's need and at their pleasure (attracting investors, stakeholders satisfaction or giving lesser taxes). Then during the time these items enjoy a little predictability because of flexibility and don't have stability. Therefore the future accruals are not important to predict the current return. Consequently the potential market inefficiency also doesn't affect the information content of the future accruals.

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9/26/2012