Capital Expenditures and Cumulative Abnormal Stock Returns

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ABSTRACT: One of the factors affecting the income is management's correct and proper decision in relation to investments, including capital expenditures. If managers act as agent for the maximization of corporate value, it is expected to perform new capital expenditures that are made using high quality opportunities cause to increases the profit from stock price reactions to these expenditures. Forty-eight Tehran stock exchange listed companies between 2005 and 2010 have been selected as the sample of the research. In this study, the dependent variable is the Cumulative Abnormal Return (CAR), and independent variables ar Unexpected Capital expenditure (UCAP), Growth Opportunities (P/B), Systematic Risk, The level of expected income and Firm size. The results about the effective factors on the main variables showed that the Cumulative market-adjusted return has significant and positive relation with unexpected capital expenditures, growth, risk, and expected income and firm size are not related to the cumulative abnormal returns. In other words, size factor would not cause any change in the information content of capital expenditure. Another result of the study is that capital expenditure has an additional content in compared to current income.
Keywords: Cumulative Abnormal Return; Unexpected Capital expenditure; Growth Opportunities

INTRODUCTION

Accounting disclosure about earnings and book value, provide the information for users of financial statements. One of the factors affecting the income is management's correct and proper decision in relation to investments, including capital expenditures. If managers act as agent for the maximization of corporate value, it is expected to perform new capital expenditures that are made using high quality opportunities cause to increases the profit from stock price reactions to these expenditures. In an efficient market the present value of changes in expected income from such investments is created, in periods in which the expenditure is made by the company, can be seen in the stock price changes. But, in accordance with generally accepted accounting principles, recognizing that the benefits of this expenditure should be delayed, until the recognition of revenue and expenses that are incurred due to the increasing the capacity of the expenses. Thus the relationship between capital expenditures, future earnings, company's growth and prices of securities are, because of this cost importance, has been selected by researchers as Lee and Nohel(1997) and jones(2000) for investigate topics. With considering this that, income arise from investment and investment make a certain about future profitability power, and based on the researches that made about income reactions coefficient, this result show that factors as grows opportunities, systematic risk, expected income snd firm size, are important in income evaluating. Thus, for specify the effect of these factors on capital expenditure, our study attempt to investigate the information content of capital expenditure along income.

Literature Review

The emergence and growth of capital markets by development of various industries has led to investors and interested to participate in business affairs, more feel need to supplementary information about companies (investee) in the market. For this reason, always are seeking ways to enhance their information and knowledge levels. One way finds a model whereby can predict future profitability and future cash flows of fundraising centers. Equipping and efficient allocation of capital, play an important role in the economic development of the country. Stock exchange is the major means of equipping and allocation of capital. There, by supply of various companies shares, created an opportunity for investors to invest. People, who invest in the stock exchange, are seeking to maximize their wealth by raising their investment returns on the companies stock. On the other hand, in Iran purchasers of securities as of any class or group, facing with the essential problems in particular, companies shares selecting and prefer one over the other in investing decisions. Therefore, any information that could be used to predict the rate of return on the company's shares, are considered by shareholders.

Future earnings can be developed based on new investment and implementation of investment projects. Investment projects is done when, their returns is at least equal to or greater than its expenses. Although some believe that maximizing

investment returns is not equivalent to firm's value maximizing, however, it is often claimed that many manager's capital expenditures, investment returns are taken into account.

Several studies report an inverse relation between the information content (i.e., price and trading volume reaction) of earnings announcements and transaction costs and pre-disclosure (or interim) information (see Grant, 1980; Atiase, 1985, 1987; Bamber, 1987; Shores, 1990; Lee, 1992).

The noise-in-earnings and deficient-GAAP arguments have similar consequences for the return–earnings correlation.Bot h weaken the contemporaneous return–earnings correlation and bias downward the earnings response coefficient (see, for example, Beaver et al., 1980; Lev, 1989; and Kothari, 1992).

Research by Kormendi and Lipe (1987), Easton and Zmijewski (1989), and Collins and Kothari (1989) identifies four economic determinants of earnings response coefficients. These studies all begin with the discounted net cash flow valuation model that is standard in the finance and economics literature.To link earnings to security returns, a one-to-one link between revisions in the market's expectations of earnings and net cash flows is assumed. The price change in response to a $1 earnings innovation is the $1 innovation plus the discounted present value of the revision in expectations of all future period's earnings. The four determinants of this price change or the earnings response coefficient are: persistence, risk, growth, and interest rate. Kormendi and Lipe (1987) and Easton and Zmijewski (1989) show that the greater the impact of an earnings innovation on market participants' expectations of future earnings, i.e., the more persistent the time-series property of earnings, the larger the price change or the earnings response coefficients. Collins and Kothari (1989) relate the earnings response coefficient to a number of commonly assumed ARIMA time-series properties of earnings, including the random walk, moving average, and autoregressive properties.

Easton and Zmijewski (1989) explain why risk negatively affects earnings response coefficient. Risk here refers to the systematic (or non-diversifiable or the covariance) component of the equity cash flows volatility. Single – or multi-beta versions of the CAPM imply that the equity discount rate increases in the equity cash flows' systematic risk. Thus, greater risk implies a larger discount rate, which reduces the discounted present value of the revisions in expected future earnings, i.e., the earnings response coefficient. Collins and Kothari (1989) predict a positive marginal effect of a firm's growth opportunities on the earnings response coefficient. Grow here refers either to existing projects or to opportunities to invest in new projects that are expected to yield rates of return that exceed the risk-adjusted rate of return, r, commensurate with the systematic risk of the project's cash flows (Kothari, 2001). Collins and Kothari (1989) predict a negative temporal relation between earnings response coefficients and the risk-free rate of interest.

Ball and Brown (1968) and Beaver (1968) provide compelling evidence that there is information content in accounting earnings announcements. Ball and Brown correlate the sign of the abnormal stock return in the month of an earnings announcement with the sign of the earnings change over that firm's previous year's earnings. They find a significantly positive correlation.

Because corporate profits reflect their investment, it is natural to expect that assessment of the relevant investment (capital expenditure) affected by growth, risk, size and other factors. However, comprehensive studies have not the case to test and prove this. Studies on the relationship between capital expenditure and future incomes do not provide strong and similar evidence. Therefore it can be said that capital expenditure's information content, faces by two attitudes:

The traditional view is that the investment such as capital expenditure provides information about the company's future income that can not be achieved by current income. As managers react to private confidential information about project expenses and future expectations. Beaver, et al. (1980); McConnell and Muscarella (1985); Trueman (1986) and Kersteian & Kim (1995) among others, have shown that capital expenditures have informational content.

Another view is that investments do not provide more information than the current income concerning future incomes growth (Collins & Kothari, 1989; Livant & Zarowin, 1990; Morck, et al.1990).

Because, investors are many interested to predict their investment income, therefore the proposes a model that can assist them in correct decision making and be cause of wandering capital's optimal allocation is needed. Therefore in order to achieve this matter many studies have been testing the effects of financial decisions and dividend announcements on the market value of the company. However, empirical evidence on the evaluation of company's capital expenditure changes effects is little and because revenues are reflective of the Company's investments, it is natural that capital expenditure decisions predict the company's profitability power and future earnings.

Kanani Amiri (2005) in his doctoral dissertation is investigated the relationship between the coefficient of capital expenditure and future stock returns. In this study, a simple model for the conditions under which company's investment to Q coefficient's movements that contain accounting information and the stock market will be sensitive, were designed mentioned. Model's key cross predicts is that stock prices have a stronger effect than the investment of capital companies. Using Kaplan's Zingales's and dependence index of equity (capital), and localization of KZ index, was found good support for this predict model. The study concluded that, capital firms in comparison to leverage firms, their capital expenditures are more sensitive

than the Q coefficient and capital expenditures of Capital Corporation with respect to future stock returns are more positive sensitivity.

Mojtahedzadeh and Ahmadi (2009), with research as the quality of earnings, accounting information and capital expenditures, were reviewed the impact of accounting information quality on management decision making. Considered measure for the the quality of accounting information, was earnings quality. Results of hypothesis testing showed that with the increasing of earnings quality, Sensitivity of future capital expenditure to current accounting earnings increases, and the increasing of this sensitivity to the accrual portion more than the cash portion.

Mashayekhi, Fadaei Nejad and Kalateh Rahmani (2010), in the research entitled "Capital expenditureو accruals and stock returns" accruals parasomnia, capital expenditure parasomnia and the stock performance improvement be investigate by using both of the abnormals in Iran's capital market. Their results indicate that capital expenditures parasomnia and accruals parasomnia is in Iran's capital market and they are separated. Also, results indicate that, investors rather than just using a parasomnia, by using both abnormals, will gain greater returns.

McConnell and Muscarella (1985), using a simple random walk model, show that changes in firm value correspond to changes in announced levels of capital expenditure.Furthermore, Trueman(1986) shows that the level of capital expenditure can be a signal about a manager's private information regarding firm value. It is therefore reasonable to believe that the level of capital expenditure is a relevant ex ante variable and that investors react to a stock dividend announcement according to their interpretation of this information (Banker, et al. 1993).

Kerstein and Kim (1995) find that the unexpected increase in capital expenditure, as a measure of investment decision, has a positive effect on annual stock return, suggesting that the increase provides a positive signal regarding the investment opportunities of the firm. This exhibits the fact that current capital expenditure has good news for the future performance of a firm and supports the use of capital expenditures for predicting future earnings or returns.

The reaction of stock market to the investment announcements by the firms was also investigated in few studies including Jones (2000) for the UK firms. Jones examines abnormal returns to test the stock market reaction to various categories of company investment announcements. . The market-adjusted returns method is used to establish whether corporate investment announcements are relevant to market valuation. Investment announcements are classified according to functional categories. His findings lend some support to a role for investment opportunities in market valuations. He report that the value of corporate growth opportunities and project size exhibit high levels of cross-sectional significance with abnormal returns. Project size returns positive coefficients for categories of investment which 'create' investment opportunities and negative for announcements of decisions to 'exercise' investment opportunities. The growth opportunities variable is found to have an inverse relationship with abnormal returns. The negative relationship stems from the large number of capital expenditure decisions in the data-set which may not create new investment opportunities and may in fact be reducing the company stock of opportunities. The dummy variables for the project categories are also significant determinants of cross-sectional variation.

Some recent studies have focused on different innovation measures as proxies of ex ante uncertainty about the value of the IPO firm. In particular, some scholars (Guo et al., 2004; Guo et al., 2006) documented a positive relation between R&D intensity and initial IPO underpricing, thus singling out R&D as a major contributor to information asymmetries. Other studies examined patent-related measures as a signal of firm's value. Chin, Lee, Kleinman and Chen (2006) found that official monthly reports of newly developed patents released to the public and the frequency of patent citations significantly increase IPO underpricing in Taiwan. Bessler and Bittelmeyer (2008) investigated the impact of innovation on the performance of German firms that went public at the "Neuer Markt" during the period from 1997 to 2002. The authors found that mean underpricing for IPOs with patents is lower relative to the group of IPOs without patents in hot issue periods, but in contrast it is higher in cold issue markets. Finally, Heeley, Matusik and Jain (2007) proved that patents reduce information asymmetries in industries where the link between patents and inventive returns is transparent, thereby reducing underpricing.

There are some evidence shows that equity misevaluation affects a firm's investment decisions. For instance, Polk and Sapienza (2009) find a positive relation between capital expenditures and a number of mispricing proxies (such as accruals, momentum, and net share issues), suggesting that overpriced firms tend to invest more and underpriced firms tend to invest less. It is possible that the observed investment effect on returns may simply reflect the equity mispricing anomalies. If the investment anomaly works through the equity misevaluation channel, the negative investment effect on stock returns should disappear or be reduced substantially after controlling for equity mispricing.

Wei and Xie (2008), and Wu, Zhang and Zhang (2008) find evidence that the accrual anomaly is related to the growth of firms, however, the studies do not address the specific mechanism that links firms' growth with the accrual anomaly or future stock returns.

Özbebek et al (2011) have research entitled "Does Turkish Stock Market React to Public Announcements of Major Capital Expenditures?" the purpose of this study is to investigate the stock market reaction to public announcements of corporate strategic investment decisions by observing companies listed in the Istanbul Stock Exchange (ISE) 30 Index. The stock market reaction to announcements of strategic investment decisions can be thought of as having two components:

The first one is price reaction which reflects general factors influencing managerial strategic decisions and firm valuation; and the second one is price reactions to information that announced to the public through firm management. In this study, based on Shareholder Value Maximization hypothesis they assume that there is a positive stock market reaction to corporate investments because the stock markets reward managers for developing strategies that increase shareholder wealth. The researchers showed that the share price reaction to its major capital expenditureits announcement, more depends on the market's assessment of the quality of its investment opportunities instead of that industry type. This study suggests that the increase (decrease) in capital expenditure, do not necessarily represent a positive reaction to the company's stock prices and returns.

According to the above question is that in the current economic conditions and capital market of Iran, is capital expenditure having beneficial information content or not? In other words, does the unexpected capital expenditure provide relevant and valuable information to the market or not?

The main focus of the present study is the changes in capital expenditure and unexpected stock returns. If the market is able to forecast the manager's investment decisions, we expect that changes in capital expenditure have no additional information content. In other words, it can be claimed that all capital expenditure information has been reflected in the price. But if the directors exclusively have information about the future benefits of their investment, it can be expected that changes in capital expenditure, providing valuable and relevant information that its informational contents will be more than the current profits and have a positive relationship with future profits.

This study investigated the relationship between changes in capital expenditures in Tehran stock exchange listed firms with abnormal stock returns and also, a separate factor of the company that is influencing the capital expenditure information content's changes.

3. Research Hypotheses

1. Capital expenditure and cumulative abnormal returns of companies listed on the exchange are related.

2. Interactional variable of growth opportunities and capital expenditures related to the Company's cumulative abnormal returns.

3. Interactional variable of systematic risk and capital expenditures related to the Company's cumulative abnormal returns.

4. Interactional variable of expected income and capital expenditures related to the Company's cumulative abnormal returns.

5. Interactional variable of firm size and capital expenditures related to the Company's cumulative abnormal returns.

4. Statistic sample and data collection method

Term of our study begins from 2005 to 2010 for 6 years.Static society of our research involves all of Tehran stock exchange listed companies. To do the research a sample selected from Tehran stock exchange listed companies .The sample includes companies that contain bellow listed terms:

1. Companies must have been listed in Tehran Stock Exchange by the beginning of 2005.

2. In order to select active firms, the exchanges of these firms should have been active during the years between 2005 and 2010 and there should not be any stops more than 4 months in their activities.

3. In order to be compared properly and avoid divergences, the fiscal year should end on 29th of Esfand (March 21st.) and during the years between 2005 and 2010 they shouldn't have changed their fiscal year.

4. They must not have had any change and operation postponement in fiscal year during the years 2005 to 2010.

5. Financial statements and explanatory notes about them should be accessible.

6. Banks, financial institutes (investment firms, financial mediated), holdings, and leasing companies couldn't be involved.

Regarding the restrictions mentioned above, 48 companies were selected as our statistical sample for time period between 2005 and 2010.

The method to collect data has been documents' search method. To collect data needed, we have used financial statements and accompanying notes. For this, we have used Rahavard-e-Novin software and also the official site of Tehran Stock Exchange.

5. Research Variables

Variables of the study consist of dependent, independent and Interactional variables.

5-1- Dependent Variable

Cumulative Abnormal Return (CAR): Abnormal returns are the difference between rate of return and the expected rate of return (market return), to determine the cumulative abnormal returns of stock during a study period in any fiscal year based on Kerstein & Kim (1995) market-adjusted model (simple model of market) are used. The model assumed that market returns (Rm) is the results of expected stock returns process in any period of time. Thus, the difference of i firm's actual returns in $\acute{y}^t$

time with market return in the same period, indicator of i firm's abnormal return in t time. In this method, we calculate the difference between actual returns and market returns in each of the year months; calculate the abnormal returns in month and by their gathering the cumulative abnormal returns of each firm is obtained. CAR is calculated as follows:

$$CAR_{it} = \sum_{t=1}^{12} R_{it} - R_{mt}$$

$CAR_{it} =$ Abnormal return of i firm in t time

5-2- Independent Variables

5-2-1- Unexpected Capital expenditure (UCAP): In this research, like Kerstein and Kim (1995) unexpected capital expenditure is calculated using a random walk model that equal to the ratio of difference between Capital expenditure in the year t with capital expenditure in t-1 year divided by market price of per share in the beginning of t year.

Note that in this study property, plant and equipment is considered as capital expenditure.

5-2-2- Growth Opportunities (P/B): In this research, like Kerstein and Kim (1995) and Ghee chong yeoh (2000) growth opportunities are calculated through dividing the market value of equity at the beginning of the year by book value of equity at the beginning of the year.

5-2-3- Systematic Risk: Primarily for research that is being conducted to investigate the effect of accounting information on market and the application of ß as a index based on the accounting is emphasis in its, calculating systematic risk or beta is needed.

The first step is to stock returns and the returns of the market portfolio are determined for a specified time interval. The second is that the covariance of the stock return and market portfolio return is calculated and then the achieved covariance is divided by returns on the market portfolio. The number which obtained is a share's beta coefficient. Beta's formula is as follows:

$$\beta_i = \frac{COV(R_{it} R_{mt})}{VAR(R_{mt})}$$

Rit= the company return's at the end of t month
Rmt= market portfolio return at the end of t month
βi= systematic risk
Note that, ß coefficients are show changes in return of a share to market index changes.

Calculating the return on equity rate: Monthly stock returns for the 48 selected companies are calculated as follows:

$$R_{it} = \frac{(P_{it} - P_{it-1}) + DPS + (P_{it} - 1000)A + P_{it}B}{P_{it-1}} * 100$$

In which:
Rit= the company returns on the month t
Pit= stock price at the end of the month t
Pit-1= stock price at the end of the month t-1
DPS= Cash dividends of per share based on the number of shares at the beginning of the period
A= percent of capital increase from cash
B= percent of capital increase from retained earnings or reserve
Calculating the return on the market portfolio:

In this study, the rate of returns on the market portfolio is calculated based on Tehran Stock Exchange total of stock market's index. Accordingly, the rate of monthly returns of market portfolio is calculated using the following equation:

$$R_{mt} = \frac{TEPIX_t - TEPIX_{t-1}}{TEPIX_{t-1}} * 100$$

In which:
Rmt= market portfolio returns
TEPIXt= stock index (prices and yields) at the end of the month t
TEPIXt-1= stock index (prices and yields) at the end of the month t-1
5-2-4- The level of expected income:

In this research, like Kerstein and Kim (1995), stockholders equity rate of returns is considered as a proxy for the expected income level, that equal to the net income ratio of the previous year divided by stockholders equity of the year beginning.

Firm size:

A major criterion for measuring the company size in this study is the Logarithm of the shares market value at the beginning of the period.

$$SIZE_{it} = LN(P_{it} * N_{it})$$

Pit = the i company stock price at the beginning of the year t
Nit= the i company stock numbers at the beginning of the year t
6. Research Models

Model 1 $: CAR_i = f(UCAP_i)$

$: CAR_i = f(UCAP_i, P/B_i, RISK_i, ROE_i, SIZE_i)$ Model 2

$$CAR_i = f(UCAP_i, P/B_i, RISK_i, ROE_i, SIZE_i, UCAP_i * P/B_i,$$
$$UCAP_i * RISK_i, UCAP_i * ROE_i, UCAP_i * SIZE_i)$$

$: Model 3$

The above models in accumulated mode (using average data) for 6 years through multiple regression analysis, are tested the research hypotheses.

Operational definitions of variables:

$CAR_{it} =$ Abnormal return of i firm in t time

$UCAP_{it} =$ Unexpected Capital expenditure of i firm in t time

$(P/B)_{it} =$ growth opportunities of i firm in t time

$RISK_{it} =$ systematic risk of i firm

$ROE_{it} =$ stockholders equity rate of return for i firm

$SIZE_{it} =$ size of i firm in t time

$UCAP_{it} * (P/B)_{it} =$ interactional variable of unexpected capital expenditure and growth opportunities for i firm in t time

$UCAP_{it} * RISK_{it} =$ interactional variable of unexpected capital expenditure and systematic risk for i firm in t time

$UCAP_{it} * ROE_{it} =$ interactional variable of unexpected capital expenditure and the ratio of expected income for i firm in t time

$UCAP_{it} * SIZE_{it} =$ interactional variable of unexpected capital expenditure and size of i firm in t time

RESULTS

Multivariate analysis

In this study, the linear relationship between variables using regression models those previously proposed and by Back Ward method were evaluated. Ultimately final model is fitted by using Back Ward method and it was introduced as the best model and the study hypothesis is tested with this model.

Final Model

In this model, in order to identify which explanatory variables affect the response variable, hypothesis is tested by using Back Ward method and ultimately, the following variables remained in the model (see table 1).

$$CAR_i = \beta_0 + \beta_1 UCAP_i + \beta_2 ROE_i + \beta_3 SIZE_i + \beta_4 (UCAP_i * P/B_i)$$
$$+ \beta_5 (UCAP_i * RISK_i) + \beta_6 (UCAP_i * ROE_i) + \varepsilon_i$$

Table 1: Final Model

	Variables	Coefficients	P- Value	D.W	R2
Final Model	β0	-.156	.000		
	UCAP	.006	.021		
	ROE	.0820	.000		
	SIZE	.013	.000	1.81	.491
	UCAP*(P/B)	.2120	.0437		
	UCAP∗ RISK	.114	.000		
	UCAP∗ ROE	.132	.000		

Now, with the final model; hypothesis is tested by using this model:

Hypothesis (1) Testing

H0: Capital expenditure and cumulative abnormal returns of companies listed on the exchange are not related.

H1: Capital expenditure and cumulative abnormal returns of companies listed on the exchange are related.

$$H_0 : \beta_1 = 0 \qquad\qquad\qquad H_1 : \beta_1 \neq 0$$

According to Table 1, explanatory variable of UCAP's coefficient is positive in equation and is significant at α= 0.05 level. This test shows that β1≠0. Therefore H0 hypothesis rejected at 0.95 confidence coefficient. This indicated for information content of unexpected capital expenditure and a cumulative abnormal return is a function of the unexpected capital expenditure. When the association was created in model that, interaction of these variables with growth opportunities and expected income ratio were entered into the model. However, its coefficient in the model is close to zero. This result is similar to the results of Beaver, et al. (1980); McConnell and Muscarella (1985); Trueman (1986) and Kersteian & Kim (1995), but is in contrast with the results of Collins & Kothari (1989); Livant & Zarowin (1990); Morck, et al. (1990); and Özbebek et al. (2011).

Hypothesis (2) Testing

H0: Interactional variable of growth opportunities and capital expenditures are not related to the Company's cumulative abnormal returns.

H1: Interactional variable of growth opportunities and capital expenditures related to the Company's cumulative abnormal returns.

$$H_1 : \beta_6 \neq 0 \qquad\qquad H_0 : \beta_6 = 0$$

According to Table 1, the interactional variable's coefficient of unexpected capital expenditure and growth opportunities(UCAP∗ (P/B)) is positive in equation and is significant at α= 0.05 level. This test shows that β6≠0. Therefore H0 hypothesis rejected at 0.95 confidence coefficient. This shows that investors with increasing the capital expenditure in firms that have high growth opportunities pay an additional amount. This issue is caused abnormal returns. This result is similar to the results of Kersteian & Kim (1995), but is in contrast with the results of Özbebek et al (2011). This is also illustrated that Iran's investors are also considered growth opportunities during the investment in companies that have increasing capital expenditures.

Hypothesis (3) Testing

H0: Interactional variable of systematic risk and capital expenditures are not related to the Company's cumulative abnormal returns.

H1: Interactional variable of systematic risk and capital expenditures related to the Company's cumulative abnormal returns.

$$H_1 : \beta_7 \neq 0 \qquad\qquad H_0 : \beta_7 = 0$$

According to Table 1, the interactional variable's coefficient of unexpected capital expenditure and systematic risk (UCAP∗ RISK) is positive in equation and is significant at α= 0.05 level. This test shows that β7≠0. Therefore H0 hypothesis rejected at 0.95 confidence coefficient. So with increasing unexpected capital expenditure, systematic risk increases and as a result cumulative abnormal returns will also increase. This result is in contrast with the results of Kersteian & Kim (1995) .

Hypothesis (4) Testing

H0: Interactional variable of expected income and capital expenditures are not related to the Company's cumulative abnormal returns.

H1: Interactional variable of expected income and capital expenditures related to the Company's cumulative abnormal returns.

$$H_1 : \beta_8 \neq 0 \qquad\qquad\qquad H_0 : \beta_8 = 0$$

According to Table 1, the interactional variable's coefficient of unexpected capital expenditure and expected income rate(UCAP∗ ROE) is positive in equation and is significant at α= 0.05 level. This test shows that β8≠0. Therefore H0 hypothesis rejected at 0.95 confidence coefficent. This shows that investors with increasing the capital expenditure in firms that have high return on equity pay an additional amount. This issue is caused abnormal returns. This result is similar to the results of Kersteian & Kim (1995), but is in contrast with the results of Özbebek et al (2011). This is also illustrated that Iran's investors are also considered expected income rate during the investment in companies that have increasing capital expenditures.

Hypothesis (5) Testing

H0: Interactional variable of firm size and capital expenditures are not related to the Company's cumulative abnormal returns.

H1: Interactional variable of firm size and capital expenditures related to the Company's cumulative abnormal returns.

$$H_1 : \beta_9 \neq 0 \qquad\qquad\qquad\qquad H_0 : \beta_9 = 0$$

According to Table 1, the interactional variable's coefficient of unexpected capital expenditure and firm size (UCAP∗ SIZE) is not significant at the 5% level in any of fitted models and in the final model, which done with Back Ward method has been removed from the model. This test shows that β9=0. Therefore H0 hypothesis will be accepted at 0.95 confidence coefficient and indicate that firm size does not affect the information content of capital expenditure. This result is similar to the results of Özbebek et al (2011), but is in contrast with the results of Kersteian & Kim (1995). Kersteian & Kim in his study concluded that capital expenditure in large firms will be creating higher abnormal returns. While Iran's investors are not considered firm size during the investment in companies that have increasing capital expenditures.

Summarizes the Results of Hypothesis Testing

The results of hypothesis testing are summarized in Table 2 that include coefficient of each hypotheses related variable, related P-Value, and each hypothesis test results.

Table 2: Summary of results

Variables	Hypothesis	Coefficient	Significance level	P- Value	Result
unexpected capital expenditure	1	.006	.05	.021	H0 is rejected
Interactional variable of growth opportunities and capital expenditures	2	.2120	.05	.043	H0 is rejected
Interactional variable of systematic risk and capital expenditures	3	.114	.05	.000	H0 is rejected
Interactional variable of expected income and capital expenditures	4	.132	.05	.000	H0 is rejected
Interactional variable of firm size and capital expenditures	5	is out of the model	.05	-	H0 is accepted

DISCUSSION AND CONCLUSION

The results about the effective factors on the main variables showed that the Cumulative market-adjusted return has significant and positive relation with unexpected capital expenditures, growth, risk, and expected income and firm size are not related to the cumulative abnormal returns. In other words, size factor would not cause any change in the information content of capital expenditure. Another result of the study is that capital expenditure has an additional content in compared to current income. This additional content, but considering growth opportunities and expected income level of each company has a greater incremental property; ie capital expenditures alone will cause return but along with growth opportunities and expected income in companies its information content is higher.

Finally, considering results of the study, the following suggestions are offered:

Results suggest that corporate managers to increase firm value in companies with growth opportunities and high equity returns, Give priority to investment in capital expenditure.

It is recommended that the investors also be considered in their decision making the company's investment in capital expenditure along income that is potential of earnings growth and the power of future profitability.

Is proposed that the stock exchange to provide conditions that listed companies on the Stock Exchange to provide information relating to the approval of investment projects and investment in productive assets via declaration and timely; so investors can receive, accurate and relevant information that timely and based on it cover informed decision making.

REFERENCES

Atiase, R. (1985). Predisclosure Information, Firm Capitalization, and Security Price Behavior around Earnings Announcements. Journal of Accounting Research, 23, 21–36.

Atiase, R. (1987). Market Implications of Predisclosure Information: Size and Exchange Effects. Journal of Accounting Research, 25, 168–175.

Ball, R., Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. Journal of Accounting Research, 6, 159–177.

Bamber, L. (1987). Unexpected Earnings, Firm Size, and Trading Volume around Quarterly Earnings Announcements. The Accounting Review, 62, 510–532.

Banker, R. D., Das, S., and Datar, S. M. (1993). Complementarity of Prior Accounting Information: The Case of Stock Dividend Announcements. The Accounting Review, 68, 28-47.

Beaver, W. (1968). The Information Content of Annual Earnings Announcements. Journal of Accounting Research, 6, 67–92.

Beaver, W., Lambert, R., Morse, D. (1980). The Information Content of Security Prices. Journal of Accounting and Economics, 2, 3–28.

Bessler, W., Bittelmeyer, C., (2008). Patents and the Performance of Technology Firms: Evidence from Initial Public Offerings in Germany. Financial Markets and Portfolio Management, 22, 323-356.

Chin, C., Lee, P., Kleinman G., Chen, P.Y. (2006). IPO Anomalies and Innovation Capital. Review of Quantitative Financial Accounting, 27, 67-91.

Collins, D., Kothari, S. (1989). An Analysis of Inter-Temporal and Cross-Sectional Determinants of Earnings Response Coefficients. Journal of Accounting and Economics, 11, 143–181.

Easton, P., Zmijewski, M. (1989). Cross-Sectional Variation in the Stock Market Response to Accounting Earnings Announcements. Journal of Accounting and Economics, 11, 117–141.

Grant, E.(1980). Market Implications of Differential Amounts of Interim Information. Journal of Accounting Research, 18, 255–268.

Guo, R., Lev, B., Shi, C. (2006). Explaining the Short and Long-Term IPO Anomalies in the US by R&D. Journal of Business Finance & Accounting, 33, 550–579.

Guo, R., Lev, B., Zhou, N. (2004). Competitive Costs of Disclosure by Biotech IPOs. Journal of Accounting Research, 42, 319–55.

Heeley, M. B., Matusik, S. F., Jain, N. (2007). Innovation, Appropriability, and the Underpricing of Initial Public Offerings. Academy of Management Journal, 50, 209–225.

Jones, A.E. (2000).Company Investment Announcements and the Market Value of The Firm. Available at: http://www.ssrn.com/abstract=248725.

Kanani Amiri, M. (2005). investigate The Relationship between Capital Expenditure and Q Coefficient with Future Stock Returns. Ph.D. thesis, Accounting, Tehran University.

Kerstein, J., & Kim, S. (1995). The Incremental Information Content of Capital Expenditure. The Accounting Review, 75, 513-26.

Kormendi, R., Lipe, R.(1987). Earnings Innovations, Earnings Persistence and Stock Returns. Journal of Business, 60, 323–345.

Kothari, S., Sloan, R. (1992). Information in Prices about Future Earnings: Implications for Earnings Response Coefficients. Journal of Accounting and Economics, 15, 143–171.

Kothari, S. P. (2001). Capital Markets Research in Accounting. Journal of Accounting and Economics, 31, 105-231.

Lee, B.S., and Nohel, T. (1997).Value Maximization and the Information Content of Corporate Investment with Respect to Earnings. Journal of Banking and Finance, 21, 661-683.

Lee, C.(1992). Earnings News and Small Trades: an Intraday Analysis. Journal of Accounting and Economics, 15, 265–302.

Lev, B. (1989). On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research. Journal of Accounting Research, 27, 153–201.

Livant,J.,and Zarowin,P.(1990). The Incremental Information Content of Cash Flow Components. Journal of Accounting and Economics, 13, 25-46.

Mashayekhi, B. Fadaei Nejad, M. A. and Kalateh Rahmani, R. (2010). Capital Expenditure, Accruals and Stock Returns. Journal of Financial Accounting Research, 2, 77-92.

McConnell, John J., and Muscarella Christ J. (1985).Corporate Capital Structure Decisions and the Market Value of the Firm. Journal of Financial Economics, 14, 399-423.

Mojtahedzadeh, V. and Ahmadi, F. (2009). Earnings Quality, Accounting Information and Capital Expenditure. Journal of Accounting Developments, Shiraz University, 1, 147-170.

Morck,R., Shleifer,A.,and Vishny,R.(1990). The Stock Market and Investment. Journal of Accounting Review. Vol.70, No.3, pp.157-215.

Polk, C. and Sapienza, P. (2009). The Stock Market and Corporate Investment: A Test of Catering Theory, Review of Financial Studies 22, 187-217.

Shores, D. (1990). The Association between Interim Information and Security Returns around Earnings Announcements. Journal of Accounting Research, 28, 164–181.

Trueman, B. (1986). The relationship between the Level of Capital Expenditures and Firm Value, Journal of financial and quantitative analysis, 21, 115-130.

Wei, K.C.J. and Xie, F. (2008). Accruals, Capital Investments, and Stock Returns. Financial Analysts Journal, 64, 34 – 44.

Wu, J.G., Zhang, L. and Zhang, X. F. (2008), Understanding the accrual anomaly, Working paper.