

## The Relationship Between Fixed Assets' Revaluation and Future Performance of Companies Listed on Tehran Stock Exchange

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**Abstract:** The capital increase seems to be one of the most important management decisions which may affect the creditors and investors decisions. On the other hand, operating profit and operating cash flows is a critical issue for each business unit. Investors, creditors and financial analysts try to maximize their wealth through analysis of operating income and operating cash flows data and its impact on future performance. In the present study the relationship between capital increase and future performance is investigated. In this regard, for the first time in Iran, it is attempted to distinct between capital increases via fixed assets revaluation and other resources and assesses their differences. Also, the proxy for future performance is considered to be operating profit and operating cash flows. In order to test the hypothesis, multivariate regression models using panel data from a sample of 246 companies listed in Tehran Stock Exchange from 2010-2014 is employed. The results show that there is a significant relationship between the capital increases using both fixed assets revaluation and other resources and companies future performance. Based on these results it might be concluded that capital increase could improve the companies' future performance, no matter what is the base of that.

**Key words:** Capital increase, fixed assets revaluation, future performance, operating profit, operating cash flow

### INTRODUCTION

Accounting is an information system. This information system as an important collection of management information systems has the task of converting financial data to accounting information. Actually, accounting information are inputs of various types of decision models that users use this information to choose among different strategies. Since, investors and creditors are the two main groups that use financial information and providing information for these two groups is one of the main concerns of management, paying attention to the type of their information needs has special necessity. According to the statement of accounting concepts, when people begin to invest, lend or do similar activities, first of all they think to increase their cash resources. Investors and creditors generally want to be aware of business unit potential to create cash and how to use it in their desired unit as their decisions are related to their investment. In the empirical research that has been done in recent years the relationship between accounting variables and stock returns and future performance, has been performed in different ways, capital increasing is one of the most important variables

that in the present study it is attempted to test the relationship between capitals increasing with future performance.

Undoubtedly, we can say the most important decision criterion for investors in the capital market is the future performance of the company. The company's future performance stems from several factors. Capital increasing and revaluation of fixed assets are from these factors.

One of the most important management decisions is capital increasing. Companies are always trying to develop their activities and spend all of their money in increasing sales and profits. Therefore in order to finance new investment and cash earning one of their methods is turning to capital markets.

Usually most companies for development of activities and implementation of development projects, due to limited bank credit of banking systems and being complicated process of getting a license for publication bonds, release their new shares. On the other hand investors as providers of financial resources needed for economic units, providing investment with different motives which includes taking advantage of profit and cash benefits and also the ownership in these units. On

the other hand economic units are also required to finance for various reasons but what seems most important for investors and firms is to increase shareholder wealth.

This study sought to determine the effect of investment on the future performance of the company. The company's future performance is evaluated by two variable operating profit and operating cash flows. And also the capital increase has been tested in two ways.

**The first method:** Capital increase from the other methods except for the revaluation of assets.

In this method, the impact of capital increase from the sharepayment to cash, conversion of people's cash demands from the company to the new shares, the transfer of undivided profits or savings or income from added value of the new shares to the company investments and conversion of bonds into shares on the future performance evaluated and tested.

**The second method:** Capital increase from the revaluation of assets.

In this method, only the impact of capital increase from the revaluation of assets on future performance is evaluated and tested.

According to capital market participants announcing the holding of an extraordinary general meeting in order to approve the capital increase as financial news can affect on the stock price and thus its efficiency. Also according to this issue that capital increase methods contain information for shareholders and lead to change in the behavior of investors, we will be seeking to answer this question that do the method of capital increasing impact on future performance?

Capital increase from the revaluation of assets will not cause cash entrance or lack of exit of cash flow. In a sense, we can say that capital increase from the revaluation of assets creates added value for investors without incurring cost and leads to changes in investors' behavior. Also capital increase from the revaluation of assets because of the tax exemption, leads to changes in the behavior of corporate executives, we will be seeking to answer this question that do Capital increase is effective in future performance? With a view to this issue that is the capital increase from the revaluation of assets different from other methods or not?

The aim of this study is to compare the relationship between "increase their capital through other methods" and "Capital increase from the revaluation of assets" with "operating profit" and "operating cash flow" of companies. This research is trying that in the case of authentication of existence of the above equations and its

significant being and compare the information content of these two variables provide investors criteria to predict future performance.

**Literature review:** There are several definitions for the word profit. According to one these definitions, net profit is change in income of owners of capital or in other words, change in net assets of a business unit during a financial period that it has been resulted from profit and continuous activities of business unit, subsidiary operations, random events and other activities, events and circumstances affecting business units, other than capital owners brought. In other words, net profits and losses, process of all changes in income of owners of capital during a period except for changes resulting from investment by the owners of capital and the distribution of resources between them (Alivar, 1994). According to statement number one Financial Accounting Standards Board accounting concepts, we can estimate performance management and corporate profitability power in a long-term horizon and the risks of investing in company or accreditation of it by using profits.

One of the factors discussed in accounting is operating cash flow. Operating cash flow in a business unit is from the most important events that accounting measurements are performed by them and it seems that creditors and investors make decisions based on operations cash flows. Cash is one of critical resource of each profit unit and creating a balance between available cash and cash needs, is the most important factor of the economic health of each profit unit. Also, cash used as a medium of exchange in the economy, thus, plays an important role in all business transactions more or less directly or indirectly.

Even, when cash does not directly involved in all transactions, It roles as a basis for measuring and accounting for other items. Cash enters profit unit through normal operation and other sources of financing and spent for operations implementation, interest payments, debt repayment and expansion of profit unit. Cash flow in each profit center reflects management decisions in the short and long-term operational plans and investment projects and financing. Investors and creditors to estimate the future cash flow of a unit profit particularly care about the effects of normal operation activities, financing activities and investing in the cash flow (Ghaffari, 2010).

Companies are always trying to develop their activities and spent all their liquidity on the way to increase sales and earn more profits. Therefore for financing in order to new investment and liquidity obtaining, one of the available ways, is that turning to

capital markets. Usually most companies are proceeded to publish the new shares for developing and implementing development projects because of limitation of credit bank of banking system and being complex of process of getting license for issuing bonds. On the other hand investors as providers of financial resources required by economic units providing investment with different motives which involves the use of profit and cash benefits and also the ownership in these units. On the other hand economic units need financial resources for various reasons but what appears most important for investors and economic entities is increasing the shareholders wealth.

According to Article 157 of the amended law part of the commercial law, the company's capital can be increased through the issuance of new shares or through increasing the nominal value of existing shares. According to Article 158 of the aforementioned law face value payment of new shares is possible in the following ways:

- Payment of contributions to cash
- Convert the cash loans of the persons from the companies to the new shares
- Transfer the undistributed or saved profits or income from added value of the new shares to the investment of the company
- Conversion of the bonds into shares

In addition to the above mentioned methods with the approval of the section "B" paragraph 78 of the country's budget law in year 2011, paragraph 39 of the country's budget law in year 2012 and by notification of their executive regulations, capital increase of economic firms due to the revaluation of assets, it is possible in budget years and it is exempt from tax, provided that subsequently with depreciation ratio of the relevant assets or at the time of sale, the basis for calculating of the tax be reformed and the mentioned firm does not revalue during the last 5 years. The tax exemption was repeated paragraph 48 of the country's budget law in year 2013 too. Also the Article 17 of the law, maximum use of production and services power in meeting the needs of the country and strengthen them in export, dated Wednesday, September 5, 2012, has established that "the increase in capital of economic enterprises due to the revaluation of assets, from the date of entry into force of this law for 5 years is exempt from tax, provided that subsequently with depreciation ratio of the relevant assets or at the time of sale, the basis for calculating of the tax be reformed and the mentioned firm does not revalue during the last 5 years".

Increase the capital through the revaluation surplus which was made possible with the approval of the above rules is also permitted in terms of accounting standards with condition of prescribed by law, based on accounting standards increasing in the carrying amount of a tangible fixed assets as a result of the revaluation of it (non-operating income of unrealized revaluation) directly under the heading of revaluation surplus recorded and classified on the balance sheet as part of incomes of owners of capital and reflect on the condition comprehensive cost and benefit. Since, the mentioned surplus income is unrealized, so capital increase is not directly allowed from its location, unless that is prescribed by law (Accounting Standard No. 11, paragraph 42).

Accuracy in above four cases shows capital increase by mentioned methods leads to the entrance cash to the company or to ban the exiting of cash flow from the company. But increase capital through revaluation surplus assets will not cause the entrance cash or ban the exiting of cash flow so it has a fundamental difference with conventional forms of capital increase. Also, due to its being emerging in the country's capital market assessment of domains, consequences and effects is not possible experimentally and previous studies about the increase of capital of companies in market capitalization examined other forms of capital increase. In view of the above, we can see that capital Increase of company which is of major management decisions is among the variables affecting on operating profit and operating cash flows of the company. On the other hand, we find that operating profit and operating cash flows are also factors affecting the Company's future performance. In the following summary of the most relevant research on the subject will be expressed.

Broedel and Walker (2010) investigated the impact of the revaluation of assets on the future performance of Brazilian companies. Variables of this research are revaluation of fixed assets, operating profit and the company's stock price. The study population of this research is Brazilian companies in the period 1998-2004. The findings indicate a negative relationship between the revaluation of fixed assets with the company's performance in terms of price and efficiency. It was also observed that the decision for revaluation in the company with corporate governance index has negative relationship and this has a positive relationship with debt and liquidity. These researchers claimed that revaluation of fixed assets to transfer information to external users of financial statements are not provided but they are designed to improve the position of assets with opportunistically motivated. Wang *et al.* (2010) tested in a research with information content of accruals, operating

cash flow to evaluate the future profitability of companies with abnormal return. Population of this study consisted of 150,896 firm-years among Greek companies between 1962 and 2003. The variables used in this study are current operational of accruals, non-current operations accruals, cash flows and profit distributed among shareholders. The results of this study showed that there is a significant relationship between cash flows, profits distributed among shareholders, current and non-current operational accruals with abnormal return stock and cash flows, current operational and non-current accruals are as criteria for assessing the future profitability of the business. The results also showed that investors pay attention to the profits distributed among shareholders more than funds paid for repayment of loans and related interest.

Aboudy *et al.* (1998) studied the effect of revaluation of fixed assets in the future performance of English companies during the years 1983 and 1995. Variables of this research are revaluation of fixed assets, operating cash flow, operating income and return on equity of the company. The results showed that revaluation of assessment has strong significant effect on stock returns. The results also showed that the effect of the revaluation of fixed assets on future performance and debt ratios is weaker than the effect of revaluation on stock returns.

Yahya Kamyabi investigated the effect of cash flows and earnings per share in prediction of dividends in companies listed on the stock exchange. In this study, according to current restrictions 73 companies during 1385-1390 were studied that research findings show that there is a significant positive relationship between earnings per share and dividend level but there was no relationship between the operating cash flows and dividends level.

Khodami and Namazian (2009) examined the effect of financial variables timeouts in predicting of operating profit and operating cash flow. The results show that there is a significant relationship between future operating cash flows and the cash component and commitment operating profit and connection with the cash component in the current year and component commitment in 2 years time lag, placed in the highest compared to other timeslots. There is also a significant relationship between future operating cash flows and the cash component and commitment operating profit and four-year time lag shows this relationship at the highest level than other time lags and the current year. So based on this research, the best prediction of operating profit and operating cash flow, can be done at above time lags.

Darabi *et al.* (2013) examined the relationship between operating cash flow and operating profit with stock

returns and the impact of information asymmetry on these relationships. In performing this research that it is an ex post facto and in terms of classification of research is an applied research, impact of information asymmetry is tested on operating profit and operating cash flow to between 70 companies from 2006-2010 using multivariate linear regression. The results of hypotheses testing showed that operating profit and operating cash flow content information for stock returns prediction and in this case operating profit information content is more than operating cash flow but at terms of information asymmetry, as information asymmetry increase, operating profit information content become less and operating cash flow will increase.

Javad Ebadi and Ismail Hassanpour examined the capital increase and its impact on abnormal returns of companies listed at the Tehran Stock Exchange. At this research they studied and identified four factors of capital increase ratio on company's stock market value, the amount of daily stock returns, firm size (market value of outstanding shares) and market cumulative returns during the capital increasing. To evaluate the impact on abnormal returns of capital increase the event verification has been used. The results obtained during the years 2004-2009 suggests negative cumulative abnormal returns during the capital increase and among the studied variables only variance of daily returns of operating variables of the share has had impact on abnormal returns.

Mousa Ahmadi and Somayeh Agha Latifi examined the effect of operating cash flow and net profit on stock returns of automotive companies listed on the Tehran Stock Exchange. In this study the relationship between two aforementioned variables during the period of 2002-2007 per year for 27 companies listed at the Tehran Stock Exchange which continually been active during these years is examined. Method of panel data was used to examine the relationship between stock returns and operating cash flow and net profit and the results show only a direct relationship between stock returns and net profit.

Fereydoun Rahnamay Roodposhti and Saeed Gol Karian in a study evaluated the effects of the methods of capital raising (cash, retained earnings, savings) on stock returns of companies listed at the Tehran Stock Exchange. In this research in addition to examining ways to increase capital, statistical data and research hypotheses were analyzed by using descriptive and inferential methods and covariance analysis and finally the result is that common method among other methods (cash, retained earnings, reserves) as the preferred method would cause greater efficiency stock, better performance of company and increasing in productivity.

**MATERIALS AND METHODS**

According to introduction and expressed literature this study has four hypotheses as below:

- There is a relationship between capital raising from other methods except the revaluation of assets and operating profit of listed companies at Tehran Stock Exchange
- There is a relationship between capital raising from other methods except the revaluation of assets and operating cash flows of listed companies at Tehran Stock Exchange.
- There is a relationship between capital raising from the revaluation of assets and operating profit of listed companies at Tehran Stock Exchange
- There is a relationship between capital raising from the revaluation of assets and operating cash flows of listed companies at Tehran Stock Exchange

**Models and variables:** In this study, for data analyzing and hypothesis testing regression models were used. To test the relationship between the increases of capital from other methods with operating profit (first hypothesis) model 1 is used to (Aboody *et al.*, 1999):

$$\Delta OPINC_{t+r,i} = \sum_{\alpha} \alpha_{0Y} YR_{Y_{ti}} + \alpha_1 Other_{ti} + \alpha_2 + \alpha_3 \Delta OPINC_{ti} + \alpha_4 MB_{ti} + \alpha_5 ASSETS_{ti} + \epsilon_{ti} \tag{1}$$

So that:

The dependent variable:

- $\Delta OPINC_{t+r,i}$ : Changes in operating profit = Operating profit of the period - operating profit of future periods

The independent variable:

- $Other_{ti}$ : Increase the company's capital throw other methods (capital raising from the payment of contribution to cash, Conversion of cash demands of the persons from the company to new shares, the transfer of undivided profits or savings or income from added value of the new shares to the company investment, the conversion of bonds into shares).

The control variables:

- $YR_{Y_{ti}}$ : Changes in the current period compared to the previous period and the next period
- $\Delta OPINC_{ti}$ : Changes in operating profit = operating profit of the previous period - operating profit of the period
- $Mb_{ti}$ : The ratio of market value to book value of shareholders incomes = Book value of shareholders incomes/Stock market value

- $ASSETS_{ti}$ : Logarithm of total fixed assets at end of the period

To test the relationship between the increases of capital from other methods with operating cash flow (second hypothesis) model 2 is used (Aboody *et al.*, 1999):

$$\Delta CFO_{t+r,i} = \sum_{\alpha} \beta_{0Y} YR_{Y_{ti}} + \beta_1 Other_{ti} + \beta_2 \Delta CFO_{ti} + \beta_3 \Delta WWC_{ti} + \beta_4 MB_{ti} + \beta_5 ASSETS_{ti} + v_{ti} \tag{2}$$

So that: the dependent variable:

- $\Delta CFO_{t+r,i}$ : Changes in Operating cash flow = Operating cash flow of the period - Operating cash flow of future periods
- $Other_{ti}$ : Increase the company's capital throw other methods (capital raising from the payment of contribution to cash, conversion of cash demands of the persons from the company to new shares, the transfer of undivided profits or savings or income from added value of the new shares to the company investment, the conversion of bonds into shares)
- $\Delta CFO_{ti}$ : Changes in operating cash flow = cash flow of the previous period - operating cash flow of the period
- $\Delta WWC_{ti}$ : Changes in working capital t = working capital in the previous period - Working capital in the period
- $MB_{ti}$ : The ratio of market value to book value of shareholders incomes = Book value of shareholders incomes/Stock market value
- $ASSETS_{ti}$ : Logarithm of total fixed assets at end of the period
- $YR_{Y_{ti}}$ : Changes in the current period compared to the previous period and the next period

In order to test the relationship between capital increases from the revaluation of fixed assets with operating profit (third hypothesis) model 3 is used (Aboody *et al.*, 1999):

$$\Delta OPINC_{t+r,i} = \sum_{\alpha} \alpha_{0Y} YR_{Y_{ti}} + \alpha_1 REV_{ti} + \alpha_2 + \alpha_3 \Delta OPINC_{ti} + \alpha_4 MB_{ti} + \alpha_5 ASSETS_{ti} + \epsilon_{ti} \tag{3}$$

So that: the dependent variable:

- $\Delta OPINC_{t+r,i}$ : Changes in operating profit = Operating profit of the period - operating profit of future periods

The independent variable:

- $REV_{it}$ : Net increase in assets resulting from Assessment revaluation (net revaluation of fixed assets)

The control variables:

- $\Delta OPINC_{it}$ : Changes in operating profit = operating profit of the previous period - operating profit of the period
- $MB_{it}$ : The ratio of market value to book value of shareholders incomes = Book value of shareholders incomes/stock market value
- $ASSETS_{it}$ : Logarithm of total fixed assets at end of the period
- $YR_{it}$ : Changes in the current period compared to the previous period and the next period

In order to test the relationship between capital increase from the revaluation of fixed assets and operating cash flows (fourth hypothesis) model 4 is used (Aboody *et al.*, 1999):

$$\Delta CFO_{t+1,i} = \sum_{\alpha} \beta_{0Y} YR_{Y_{it}} + \beta_1 REV_{it} + \beta_2 \Delta CFO_{it} + \beta_3 \Delta WC_{it} + \beta_4 MB_{it} + \beta_5 ASSETS_{it} + v_{it} \quad (4)$$

So that: the dependent variable:

- $\Delta CFO_{t+1,i}$ : Changes in Operating cash flow = Operating cash flow of the period - Operating cash flow of future periods

The independent variable:

$REV_{it}$ : Net increase in assets resulting from Assessment revaluation (net revaluation of fixed assets)

The control variables:

$\Delta CFO_{it}$ : Changes in operating cash flow = cash flow of the previous period - operating cash flow of the period

$\Delta WC_{it}$ : changes in working capital t = working capital in the previous period- Working capital in the period

$MB_{it}$ : The ratio of market value to book value of shareholders incomes = Book value of shareholders incomes/Stock market value

$ASSETS_{it}$ : Logarithm of total fixed assets at end of the period

- $YR_{it}$ : Changes in the current period compared to the previous period and the next period

**Population and sample:** According to the purpose of this study which it is examine the relationship between the increase in capital and the Company's future performance, the type of research in terms of goal is functional and in terms of nature is descriptive correlational. According to the subject of the present study and its applications the research community is companies listed in the Tehran Stock Exchange. Locational territory of the research is companies listed in the Tehran Stock Exchange. Timing territory of the research is 2010 to 2014 AD.

In the present study to determine the statistical sample, the systematic elimination method is used. Therefore, those statistical society companies that satisfy the following conditions are, will be selected as a statistical sample and the rest will be deleted. Conditions and criteria applied to obtain samples in this study are as follows:

- Be listed on Tehran Stock Exchange before the year 2010
- Companies have at least once capital increasing during preferred courses
- Companies have not changed their financial year during preferred courses

According to the above conditions and restrictions, among firms listed on the Tehran Stock Exchange, during the period under review a total of 246 companies have increased capital that 39 companies have capital increase from the method of assessment revaluation and 207 companies have increased their capital from the other methods that all companies have been examined.

In this study required data to calculate variables were extracted from databases "Tadbir Pardaz" and "Rahavard Novin". In the case of incomplete being of data in these databases, it is referred to the website research management, development and Islamic studies of stock exchange organization. On the other hand data analysis was done by software Excel and Eviews.

In order to test hypotheses to determine the type of the combination data F-Limmer and Hausman test is used. Hypotheses are tested by using regression models. In regression models considering the amount of p-value will decide to accept or reject the null hypothesis. If the p-value be less than significance level of 0.05 the null hypothesis will be rejected, otherwise null hypothesis will be accepted.

## RESULTS AND DISCUSSION

Table 1 shows descriptive statistics variables of models.

Table 1: Descriptive statistics variables of models

Parameter	Variables						
	ASSETS	DCFO	DOPINC	DWC	MB	REV	REV1
Average	4979880	2506917	2470506	-493240	3.0	1905471	2947537
Middle	268048	138721	251863	36044	2.3	150000	403644
Maximum	11000000	39158369	45838482	39232950	12.4	120000000	34887357
Mini	2040	-9768354	-199988	-54192038	0.0	693	2026
SD	136	668	585	679	2.5	926	739
Skewness	4.2	2.9	4.4	-3.4	1.3	10.7	3.4
Elongation	24.4	11.8	27.2	35.9	4.6	129.8	13.7

Table 2: F Limer test of the first hypothesis

Model	F Limer test		
	F-Limmer statistics	Possibility	Result
3	1.0	0.47	Combined

Table 3: Kolmogorov-Smirnov test the first hypothesis

The dependent variable	Z statistic	p-value
$\Delta$ OPINC	0.84	0.25

Table 4: Durbin - Watson statistic first hypothesis

Limits of lack of autocorrelation	Durbin-Watson statistic
1.5 < DW < 2.5	1.87

**Test of first hypothesis:** To test the first hypothesis a multivariate regression model is used as below:

$$\Delta OPINC_{t+T,i} = \sum_{\alpha} \alpha_{0Y} YR_{Yt_i} + \alpha_1 Other_{t_i} + \alpha_2 + \alpha_2 \Delta OPINC_{t_i} + \alpha_3 MB_{t_i} + \alpha_4 ASSETS_{t_i} + \epsilon_{t_i}$$

Before fitting the model to test the hypothesis, the type of method (fusion method or a sign) and of the classical assumptions of regression should be reviewed

**F Limer and Hausman tests:** As can be seen, the p-value is 0.47 and more than 0.05, thus data compilation methods accepted. Considering that the panel approach was adopted, Hausman test is not performed (Table 2).

**The regression model assumptions:** Before fitting the model based on the data, pre-assumptions of model will be investigated.

**Test for dependent variable's normality:** According to the p-value of the test which equals 0.25 and more than 0.05, so the null hypothesis is accepted and  $\Delta$ OPINC variable is normal (Table 3).

**Test for lack of residuals' autocorrelation:** In the present study Durbin-Watson test is used to detect the presence or absence of autocorrelation. If this amount be about 2, there is not autocorrelation. According to the Durbin-Watson statistic which is equal to 1.87, it was found that the model has not autocorrelation (Table 4).

Table 5: Check the consistency of variance of the first hypothesis

p-value	Statistic value
0.45	F-statistic(0.75)

Table 6: The correlation between the independent variables first hypothesis

Correlation coefficient	OTHER	DOPINC	MB	ASSETS
OTHER	1.000000			
DOPINC	-0.018868	1.000000		
MB	-0.061407		1.000000	
ASSETS	0.166491	0.054660	-0.209254	1.000000

**Test for residuals' homoscedasticity:** According to the table below and the amount of test p-value obtained for White test which is 0.45 and is more than the significant level 0.05 (p = 0.05), the null hypothesis (the existence of variance consistency) will be accepted (Table 5). The test of lack of alignment between the independent variables (correlation). The results of the correlation coefficient between independent variables are presented in Table 6.

Normally if the correlation between two variables is <50%, it can be said there is no correlation between the two variables. According to the correlation between all independent variables is <0.50, so we can assume obtained correlations negligible and accept the assumption of independence linear of the independent variables from each other.

**Test for variables' reliability:** The Levin-Lin Choi test p-value is less than 0.05 for all variables (p = 0.05), thus the null hypothesis is rejected and variables are static (Table 7). The results of the analysis of the data are reflected in Table 8.

According to the p-value obtained for the F statistic, which is zero (p = 0.05),  $H_0$  is rejected and this shows that all regression coefficients are not zero simultaneously. Therefore, there is a significant relationship between all independent variables and the dependent variable at the same time.

According to Table 8 and the p-value of t-statistic for the variable capital increase from other methods which is

Table 7: The results of stability of variables in the model

Statistic value	Variables						
	ASSETS	DCFO	DOPINC	DWC	MB	REV	REVI
Levin, Lin and Chu	-13625.2	-3196	-83.1	-286.8	-21.0	-83.0	-84.4
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 8: The results of analysis of data to test the first hypothesis (the dependent variable changes in operating profit)

Variables	Coefficient	Standard deviation	t-statistic	p-values
C	0.04	3.06	0.01	0.99
REV	1.10	0.01	122.68	0.00
DOPINC	-0.0002	0.0004	-0.60	0.55
MB	1.51	0.45	3.38	0.00
ASSETS	-0.001	0.001	-0.56	0.58

R<sup>2</sup> = 0.91; F-statistic = 505.1; Adjusted R<sup>2</sup> = 0.90; Prob. (Fstatistic) = 0.00

Table 9: Kolmogorov-Smirnov test the second hypothesis

Independent variable	Z statistic	p-value
ΔCFO	0.75	0.33

zero and is less than error level of 0.05 (p = 0.05), null hypothesis (assuming no correlation between the increase in the capital of other methods and operating profit) is rejected and as a result there is a significant relationship between increasing capital than other methods and operating profit of firms listed in the Tehran Stock Exchange. Therefore, the first hypothesis is accepted. Also according to the coefficient of increase in the capital from the other ways that are positive and equal to 1.10, resulting there is a positive correlation between the increase in the capital of other methods and operating profit. Adjusted R<sup>2</sup> value of model is 0.91, shows that 90% of changes of dependent variable explained by the independent variables; in other words 90% of the changes of dependent variable is related to the independent variables.

**Test of second hypothesis:** To test the second hypothesis a multivariate regression model is used:

$$\Delta\text{CFO}_{t+i} = \sum_{\alpha} \beta_{0Y} YR_{\gamma t} + \beta_1 \text{Other}_{it} + \beta_2 \Delta\text{CFO}_{it} + \beta_3 \Delta\text{WC}_{it} + \beta_4 \text{MB}_{it} + \beta_5 \text{ASSETS}_{it} + v_{it}$$

Before fitting the model to test the hypothesis, the kind of method (fusion method or panel) and classical assumptions of the regression be checked.

**The regression model assumptions:** Before fitting the model based on the data, pre assumptions of model will be investigated.

**Normality of the dependent variable test:** According to the test p-value amount 0.33 and more than 0.05, therefore the null hypothesis is accepted and ΔCFO variable is normal (Table 9).

Table 10: Durbin-Watson statistic second hypothesis

Limits of lack of autocorrelation	Durbin-Watson statistic
1.5 < DW < 2.5	2.20

Table 11: Check the consistency variance second hypothesis

p-value	Statistic value
0.43	F-statistic(0.76)

**Test for Lack of residuals' autocorrelation:** According to the Durbin-Watson statistic which is equal to 2.20, it was found that the model has not autocorrelation (Table 10).

**Test for residuals' homoscedasticity:** According to the table below and the amount of test p-value obtained for White test which is 0.43 and is more than the significant level 0.05 (p = 0.05), the null hypothesis (the existence of variance consistency) will be accepted. It shows that there is no residuals anisotropy of variance problem (Table 11).

**The test of lack of alignment between the independent variables (correlation):** The results of the correlation coefficient between independent variables provided in Table 12. The results of the data analysis reflect in Table 13:

According to the p-value obtained for the F statistic, which is zero (p = 0.05), H<sub>0</sub> is rejected and this shows that all regression coefficients are not zero simultaneously. Therefore, there is a significant relationship between all independent variables and the dependent variable at the same time.

According to Table 13 and the p-value of t-statistic for the variable capital increase from other methods which is zero and is less than error level of 0.05 (p = 0.05), null hypothesis (assuming no correlation between the increase in the capital of other methods and operating profit) is rejected and as a result there is a significant relationship between increasing capital than other methods and operating profit of firms listed in the Tehran Stock Exchange. Therefore, the second hypothesis is accepted. Also according to the coefficient of increase in the capital from the other ways that are positive and equal to 0.46, resulting there is a positive correlation between the increase in the capital of other methods and operating profit.

Adjusted R<sup>2</sup> value of model is 0.90, shows that 90% of changes of dependent variable explained by the



Table 12: the correlation between the independent variables the second hypothesis

Correlation coefficient	OTHER	DWC	MB	ASSETS	DCFO1
OTHER	1.000000				
	-				
DWC	-0.035179	1.000000			
	0.6097	-			
MB	-0.61407	0.066310	1.000000		
	0.3725	0.3355	-		
ASSETS	0.166491	0.419873	-0.209254	1.000000	
	0.0150	0.0000	0.0021	-	
DCFO1	0.109428	-0.033473	-0.122143	0.516592	1.000000
	0.1113	0.6271	0.0753	0.0000	-

Table 13: The results of data analysis to test the second hypothesis (the dependent variable: changes in operating cash flows)

Variables	Coefficient	Standard deviation	t-statistic	p-values
C	84.05	10.67	7.88	0.00
REV	0.46	0.07	6.34	0.00
DCFO	-0.001	0.01	-0.20	0.84
DWC	0.23	0.03	6.72	0.00
MB	0.32	1.26	0.26	0.80
ASSETS	0.17	0.02	7.42	0.00

R<sup>2</sup> = 0.91; F statistic = 230.1; Adjusted R<sup>2</sup> = 0.90; Prob. (Fstatistic) = 0.00

Table 14: Durbin-Watson statistic third hypothesis

Limits of lack of autocorrelation	Durbin-Watson statistic
1.5 < DW < 2.5	1.87

Table 15: Check the consistency variance third hypothesis

p-value	Statistic value
0.45	F-statistic (0.75)

independent variables; in other words 90% of the changes of dependent variable is related to the independent variables.

**Test of third hypothesis:** To test the third hypothesis a multivariate regression model is used as follows:

$$\Delta OPINC_{t+r,i} = \sum_{\alpha} \alpha_0 YR_{Y_{it}} + \alpha_1 REV_{it} + \alpha_2 + \alpha_3 \Delta OPINC_{it} + \alpha_4 MB_{it} + \alpha_5 ASSETS_{it} + \epsilon_{it}$$

Before fitting the model to test the hypothesis, the kind of method (fusion method or panel) and classical assumptions of the regression be checked.

**The regression model assumptions:** Before fitting the model based on the data, pre-assumptions of model will be investigated.

**Test for Lack of residuals' autocorrelation:** According to the Durbin-Watson statistic which is equal to 1.87, it was found that the model has not autocorrelation (Table 14).

**Test for Residuals' Homoscedasticity:** According to the table below and the amount of test p-value obtained for White test which is 0.45 and is more than the significant level 0.05 (p = 0.05), the null hypothesis (the existence of

Table 16: The correlation between the independent variables the third hypothesis

Correlation coefficient	REV1	DOPINC	MB	ASSETS
REV1	1.000000			
	-			
DOPINC	-0.018868	1.000000		
	0.7843	-		
MB	-0.61407	0.006931	1.000000	
	0.3725	0.9199	-	
ASSETS	0.166491	0.054660	-0.209254	1.000000
	0.0150	0.4274	0.0021	-

Table 17: The results of data analysis to test the third hypothesis (the dependent variable changes in operating profit)

Variables	Coefficient	Standard deviation	t-statistic	p-values
C	0.41	2.49	0.16	0.87
REV1	0.54	0.01	85.65	0.00
DOPINC	-0.018	0.01	-2.73	0.01
MB	1.41	0.15	9.69	0.00
ASSETS	-0.001	0.001	-0.54	0.59

R<sup>2</sup> = 0.93; F-statistic = 655.5; Adjusted R<sup>2</sup> = 0.93; Prob. (Fstatistic) = 0.00

variance consistency) will be accepted. It shows that there is no residuals anisotropy of variance problem (Table 15).

**The test of lack of alignment between the independent variables (correlation):** The results of the correlation coefficient between independent variables provided in Table 16. The results of the data analysis reflect in Table 17.

According to the p-value obtained for the F-statistic which is zero (p = 0.05), H<sub>0</sub> is rejected and this shows that all regression coefficients are not zero simultaneously. Therefore, there is a significant relationship between all independent variables and the dependent variable at the same time.

According to Table 17 and the p-value of t-statistic for the variable Capital increase from the revaluation of assets which is zero and is less than error level of 0.05 (p = 0.05), null hypothesis (Assuming no correlation between the Capital increase from the revaluation of assets and operating profit) is rejected and as a result there is a significant relationship between Capital increase from the revaluation of assets and operating profit of firms listed in the Tehran Stock Exchange. Therefore, the third hypothesis is accepted. Also according to the coefficient

Table 18: Durbin-Watson statistic forth hypothesis

Limits of lack of autocorrelation	Durbin-Watson statistic
1.5 < DW < 2.5	2.12

Table 19: Check the consistency variance forth hypothesis

p-value	Statistic value
0.41	F-statistic(0.77)

Table 20: The correlation between the independent variables the forth hypothesis

Correlation coefficient	REV1	DWC	MB	ASSETS	DCFO1
REV1	1.000000				
	-				
DWC	-0.035179	1.000000			
	0.6097	-			
MB	-0.61407	0.066310	1.000000		
	0.3725	0.3355	-		
ASSETS	0.166491	0.419873	-0.209254	1.000000	
	0.0150	0.0000	0.0021	-	
DCFO1	0.109428	-0.033473	-0.122143	0.516592	1.000000
	0.1113	0.6271	0.0753	0.0000	-

of Capital increase from the revaluation of assets that are positive and equal to 0.54, resulting there is a positive correlation between Capital increase from the revaluation of assets and operating profit.

Adjusted R<sup>2</sup> value of model is 0.93, shows that 93% of changes of dependent variable explained by the independent variables; in other words 93% of the changes of dependent variable is related to the independent variables.

**Test of forth hypothesis:** To test the forth hypothesis a multivariate regression model is used as below:

$$\Delta \text{CFO}_{t+1} = \sum_{\alpha} \beta_{0Y} \text{YR}_{\alpha t} + \beta_1 \text{REV}_{it} + \beta_2 \Delta \text{CFO}_{it} + \beta_3 \Delta \text{WC}_{it} + \beta_4 \text{MB}_{it} + \beta_5 \text{ASSETS}_{it} + v_{it}$$

Before fitting the model to test the hypothesis, the kind of method (fusion method or panel) and classical assumptions of the regression be checked.

**The regression model assumptions:** Before fitting the model based on the data, pre assumptions of model will be investigated.

**Test for lack of residuals' autocorrelation:** According to the Durbin-Watson statistic which is equal to 2.12, it was found that the model has not autocorrelation (Table 18).

**Test for residuals' homoscedasticity:** According to the table below and the amount of test p-value obtained for White test which is 0.41 and is more than the significant level 0.05 (p = 0.05), the null hypothesis (the existence of variance consistency) will be accepted. It shows that there is no residuals anisotropy of variance problem (Table 19).

Table 21: The results of data analysis to test the forth hypothesis (the dependent variable changes in operating profit)

Variables	Coefficient	Standard deviation	t-statistic	p-values
C	79.49	11.23	7.08	0.00
REV1	0.01	0.002	2.77	0.01
DCFO	0.47	0.06	7.22	0.00
DWC	0.23	0.03	7.09	0.00
MB	0.58	1.29	0.45	0.65
ASSETS	0.17	0.02	7.69	0.00

R<sup>2</sup> = 0.93; F-statistic = 114.7; Adjusted R<sup>2</sup> = 0.92; Prob. (Fstatistic) = 0.00

**The test of lack of alignment between the independent variables (correlation):** The results of the correlation coefficient between independent variables provided in Table 20. The results of the data analysis reflect in Table 21.

According to the p-value obtained for the F-statistic which is zero (p = 0.05), H<sub>0</sub> is rejected and this shows that all regression coefficients are not zero simultaneously. Therefore, there is a significant relationship between all independent variables and the dependent variable at the same time.

According to Table 21 and the p-value of t-statistic for the variable Capital increase from the revaluation of assets which is zero and is less than error level of 0.05 (p = 0.05), null hypothesis (Assuming no correlation between the Capital increase from the revaluation of assets and operating profit) is rejected and as a result there is a significant relationship between Capital increase from the revaluation of assets and operating profit of firms listed in the Tehran Stock Exchange. Therefore, the forth hypothesis is rejected. Also according to the coefficient of Capital increase from the revaluation of assets that are positive and equal to 0.01, resulting there is a positive correlation between Capital increase from the revaluation of assets and operating profit.

Adjusted R<sup>2</sup> value of model is 0.92, shows that 92% of changes of dependent variable explained by the independent variables; in other words 92% of the changes of dependent variable is related to the independent variables.

## CONCLUSION

The results of tests carried out using panel data in the Table 8 showed that there is a significant relationship between Capital increase from the other methods and operating profit of firms listed in the Tehran Stock Exchange. Therefore, the first hypothesis is accepted. Accordingly, we can conclude that there is a positive relationship between the Capital increase from the other methods and operating profit and Capital increase from the other methods increase the operating profit. Investors

as providers of financial resources needed economic units provide investment with different motives which involves the use of profit and cash benefits as well as ownership in these units. Also, since the investment objective are profits and ultimately maximize wealth, in order to achieve this, Invest In companies that have high operating profit through the analysis of financial statements. The result of this hypothesis could be an indicator for company profit forecasts for Investors.

The results obtained and conducted tests using the combined data in Table 14 showed that there is a significant relationship between Capital increase from the other methods and operating cash flow of firms listed in the Tehran Stock Exchange. Therefore, the second hypothesis is accepted. Accordingly, we can conclude that there is a positive relationship between the Capital increase from the other methods and operating cash flows. And Capital increase from the other methods (other than Revaluation of assets) increased the operating cash flows. Operating cash flows in a commercial unit is from the major events that accounting measurements are done according to them. Shareholders, investors and financial analysts can use the outcome of this hypothesis as a measure of forecast of stock returns and future performance of the company as well as creditors and lenders can use it as a factor to predict Dividend payments and commitments in maturity.

The results obtained and conducted tests using the combined data in Table 17 showed that there is a significant relationship between Capital increase from the revaluation of assets and operating cash flow of firms listed in the Tehran Stock Exchange. Therefore, the third hypothesis is accepted. Accordingly, we can conclude that there is a positive correlation between the increase in capital from the revaluation of assets and operating profit. Capital increase from the revaluation of assets given that it will not cause to login Cash or lack of exit of cash flow, in other words, it has the lowest cost for investors, increase the operating profit. The result of this hypothesis be an indication for managers and decision makers within the organization for the Capital increase from the revaluation of assets in order to increase the company's operating profit which is a measure of users to predict future stock returns and performance without tolerance any charge by investors.

Also Stock Exchange as the trustee of capital market by applying the relevant rules can cause using current values in the evaluation of fixed assets in order to access relevant and useful information using the revaluation of fixed assets and increase corporate profits and increase the efficiency of capital markets.

The results obtained and conducted tests using the combined data in Table 21 showed that there is a significant relationship between Capital increase from the revaluation of assets and operating cash flow of firms listed in the Tehran Stock Exchange. Therefore, the fourth hypothesis is rejected. Accordingly, we can conclude that there is a positive correlation between the increase in capital from the revaluation of assets and operating profit. Capital increase from the revaluation of assets will not cause to login Cash or lack of exit of cash flow but it will cause increase in operating cash flows that can use it as a measure of forecast of stock returns and future performance of the company and also as a factor to predict Dividend payments and commitments in maturity.

The cause of such an outcome on this hypothesis can be guessed that according to the third hypothesis because the Capital increase from the revaluation of assets impacts on operating profit, this influence is effective in operating profit on cash flows, also according to the results of second hypothesis, due to the capital increase from the other methods is associated with operating cash flows, it can be inferred that all methods of Capital increase have relations with operating cash flows. Results of this study are similar to findings Fereidoun Rahnamay Roodposhti and Saeed Golkarian which examined the effects of the methods of Capital increase (cash, retained earnings, savings) on stock returns of companies listed on the Tehran Stock Exchange and concluded that the common method among other methods (cash, retained earnings, reserves) is as a preferred method cause greater efficiency of stock, better performance as well as increase in productivity of the company. Also similar to the findings David Aboudy and colleagues which examined the impact of the revaluation of fixed assets on English company's future performance and the results of the study showed revaluation of assets has a strong significant impact on stock returns. In spite of the results of Alexander Braudel Lopez and Martin Walker that examined the impact of the revaluation of assets on the future performance of Brazilian companies, the findings of this study suggests a negative relationship between revaluation of fixed assets with the company's performance in terms of price and efficiency. The reason for the difference in outcomes in Brazil can be due to this point that the researchers claimed that revaluation of fixed assets is not provided for data transfer to external users of financial statements but they are designed to improve the location of assets with opportunistic motivation, it also seems that future performance variables and the studied statistical

population are another reasons for being the research results different. In this study, future performance variables, operating profit and operating cash flows have a significant relationship with the revaluation of assets.

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