The Investigation of The Effect of Accruals on Stock Returns after Financing Activities of Listed Companies in Tehran Stock Exchange

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ABSTRACT: One of the basic criteria for deciding in exchange is stock returns, stock returns itself has the information content and Most potential investors use it in financial analysis and projections. The purpose of this research was to investigation the effect of accruals on stock returns after external financing activities of listed companies in Tehran stock exchange. Stock returns as the dependent variable and accruals, short-term debt, long term debt and equity were used as independent variable. To test the research hypotheses, the data on the 116 listed companies in Tehran stock exchange were analyzed as the statistical sample for the period 2002 to 2011 by using of the Panel data analysis methods and Respective statistical test. This study has two hypotheses. The result of first and second hypothesis shows that the accrual financing activities through shareholders' equity and long-term debt and short-term debt has not a significant impact on returns.

Key Words: Accruals, Stock returns, Financing activities

INTRODUCTION

Part of influencing variables on stock returns of financial information is provided by the accounting system. Important activity in the field of investment is the optimal allocation of resources. Meanwhile, investors are always looking for maximum performance using financial resources are provided for them. Since the predication of stock return is one of the most important issues for investors in capital markets in order to help them in this area .Useful and relevant information can be provided for investors (foroughi and Hamidian,2010).There is no doubt that the new investment is necessary for growth and competitiveness in today's world. Financed of the required investment which is usually done through a variety of financial instruments, each has its own characteristics. The stock market reacts to these events by stock returns. Therefore determining the effects of conduct financing activities on stock returns can help investors, managers and other users make the right decisions (Rahnamaye Roudposhti, et al 2009).Regard to that, today investor’s attention to profit figure is too high and too much focus of users to profit also enhances the quality of it and accrual accounting is regarded as an indicator of earnings quality. When accounting profit is greater than the cash flow entrance, there is a surplus proceeds through accruals. Such shares will be less efficient because these surpluses create often by chief naughty. Of course this does not mean invalidating accruals. In many cases, these items represented future growth opportunities and good performance in the past. But since these items are more places in management manipulation of monetary items is expected that the market will give them less weight (Mehrani and BehbehaniNia,2010).

Now the question arises that how accruals on stock returns following external organization of financing activities effective is it? The researchers were always looking for the affecting factors of stock returns. Returns is one of the research done in the field of research, Sloan (1996).The results indicate that accruals with return, may have a significant negative relationship. This negative relationship in literature is called abnormal accruals(Foroughi and Hamidian,2010).In this context, the aim of this study was to determine the effect of accruals on stock returns following external financing activities, also the aim of this study was to answer the question what is the impact on returns of financial resources and whether there is a correlation between accruals and stock returns or not.

Theoretical and research background

In the contemporary literature, two studies have been conducted regarding accruals. Batch studies investigated the information content of accruals and other groups to explore the relation between accruals and stock returns (abnormal accruals) (Zhang, 2007; quoted Foroughi and Hamidian, 2010).Accounting information reflected in the financial statements that would be useful when making decisions is reliable and relevant. But all
of accounting information does not have equal reliability. Information content of earnings and its components, widely has been examined in the finance and accounting literature. Since accounting earnings has an essential role in the financial reporting and forecasting stock returns, to determine the items and associated variables with accounting earnings to predict future earnings and stock prices is important (Foroughi and Hamidian, 2010).

Jones (1991) defined accrual as the difference between profit and cash flow from operations. The accrual is said that the cause of postponement recorded an income and expense (ibid). Sloan (1996) considered accruals as Changes in working capital to be a fraction of depreciation expense. The definition of accruals, is not included non-current operating assets, liabilities of non-current operating, non-monetary financial assets and liabilities (ibid).

Richardson and colleagues (2005) provided a comprehensive definition of accruals. Accruals are the difference between commitment profit and cash dividends. By definition, accruals related to non-current operating assets and liabilities and financial assets also applies (such as receivable long-term accounts) (Sheikhi, 2010; quoted Foroughi and Hamidian, 2010).

Current and future financial needed activities that should be funded. New financial requirements of the company are provided inside the company (not split the profits) or from outside the company (Anvari Rostami, 1999). In general, companies are financed in two ways: the company's inside funds (including funds derived from the sale of fixed assets, the financing activities of the Company and retained earnings) and financial resources outside of the company including (borrow money on the issued bonds, the issuance of preferred stock, the issuance of common stock, the issuance of common stock options) (Rahnamaye Roudposhti and Golkariyan, 2005)

Daniel and Thomas (2006) evaluated the weighting the evidence on the relation between external corporate financing activities, accruals and stock returns. They showed that once controlling for total accruals, the relation between external financing activities and future stock returns is attenuated and not statistically significant. These findings are consistent with Richardson and Sloan.

The Mei Luo (2008) examined the research on Unusual operating cash flows and stock returns. The results show that the unusual individual cash flow items contain a significant incremental predictive ability for future cash flows. Additional return tests show that stock prices fail to fully reflect their predictive value, suggesting that the current reporting practice may mislead investor perceptions of a firm’s cash generating ability and investors could benefit from a more explicit presentation of cash flows from operations.

David et al (2009) examined the relationship between Accruals, cash flows, and aggregate stock returns. This research examines whether the firm-level accrual and cash flow effects extend to the aggregate stock market. In sharp contrast to previous firm-level findings, aggregate accruals is a strong positive time series predictor of aggregate stock returns, and cash flows is a negative predictor. In addition, innovations in accruals are negatively contemporaneously correlated with aggregate returns, and innovations in cash flows are positively correlated with returns. These finding suggest that innovations in accruals and cash flows contain information about changes in discount rates, or that firms manage earnings in response to market wide undervaluation.

Georiou et al (2011) investigated the Accruals and the performance of stock returns following external financing activities. This research investigates the relation of the external financing anomaly with the accrual anomaly, by focusing separately on working capital accruals and long-term accruals, they find that external financing and accrual hedge portfolios not only generate superior returns, but they also constitute statistical arbitrage opportunities. Portfolio-level analysis and firm-level cross-sectional regressions show that the ability of external financing measures in predicting future returns remains strong, after controlling for working capital accruals. However, this ability is substantially reduced after controlling for long-term accruals. The results appear to be consistent with investors’ failure to recognize agency related over investment and/or opportunistic earnings management.

Akbar et al (2011) examined the value relevance of cash flows, current accruals, and noncurrent accruals in the UK. Using a valuation model-based methodology, and employing a UK sample of non-financial firms for the years 1993 to 2007, the results suggest strong support for the assertion that cash flows can have incremental value relevance relative to either earnings or funds flows. By implication, cash flows can have separate value relevance from total and, in particular, current accruals. There is slightly less consistent evidence that current and non-current accruals can have separate value relevance but, nonetheless, the results are still strongly in favour in this respect. Generally, the main source of the increase in explanatory power for market values is the separate inclusion of cash flow measures in the estimated regressions. As a consequence, conclude that the statement of cash flows in the UK provides information useful to UK investors in valuing firms.

Fonseka et al (2012) examined the Equity financing capacity and stock returns: Evidence from China. The results show that the capacity for rights and public offers is reliably negatively related with future returns for firms that met regulatory criteria. Further, the capacity for rights offers is strongly negatively related with returns for firms that met the criteria and applied for approval, and for firms that issued equity after meeting the criteria.
and obtaining approval. Thus, there is clear evidence of a negative relation between equity financing capacity and stock returns in China.

Jenny Chu (2012) examined the Accruals, Growth, and Future Firm Performance. high growth firms tend to have negative accruals. Contrary to the growth hypothesis, high growth firms with low accruals experience high future profitability and returns. These findings indicate that accounting distortions embedded in accruals have distinct implications for future performance.

Khajavi and Nazemi (2005) examined the association between earnings quality and stock returns, with emphasis on the role of accrual accounting in Tehran's Stock Exchange. In this study effect of accrual figures (differences between accounting income and cash flow are defined) on the profits of companies listed on the Stock Exchange has been investigated. The results show that average stock returns are not influenced by the rate of accrual accounting and its related components. In other words, we cannot accept that returns between firms reported least and most accrual accounting has a significant difference.

Rahnamaye Roudposhti and colleagues (2009) examined the relationship between cash flow from operations of financing activity and stock returns in the accepted company in Tehran Stock Exchange. The results of the research indicate cash resulting from the activities of the financing has not a significant relationship with stock returns. Lack of attention to the capital market to information relating to the financing activities reported in the case of financial flows and towards the unsure efficient use of the funds by management provisioning can be an uncertain reaction from the market because of the financing phenomenon.

Morad Zadeh Fard and Nade Ali Pour Monfard (2009) examine the relationship between cash flows arising from financing activities and stock returns. The statistical community of research includes accepted companies on the Tehran Stock Exchange that in the time zone of research (2003-2007) have the necessary information to calculate the research variables. Among this community, 111 companies were studied according to criteria and the features of this research. The results of the research show that in total there is a reverse relationship between cash resulting from the activities of the procurement and stock returns. The investigation also indicates that no significant relationship observed between the releases of stocks and stock returns, but a significant relationship observed between the proceeds of the borrowing and the stock returns.

Babajani and Yanchishmah (2011) investigate the effect of more reliance on accruals items and stock return. The sample was composed of companies listed in Tehran Stock Exchange for the period 2001 to 2009, that the sample of 141 companies was selected. The findings show that there is no stronger negative relationship between that current period interest of accruals with low reliability and future stock returns.

Dastgir and Rastgar (2011) examined the relationship between earnings quality (sustainability benefits), size of accruals and stock returns with accruals quality. In this study, the relationship between earnings quality (stable income) and stock returns has been studied with accruals quality. Thus, 95 of the firms listed in Tehran Stock Exchange during the period 2000-2008 were analyzed. The results show that the quality of earnings (earnings stability) is positively associated with accruals quality, while reducing the accruals size and increasing the quality of accruals, return on equity increases.

Research hypotheses

H₁: the accrual of activities financed through equity has a significant impact on stock returns.

H₂: Accrual of activities financed through long-term debt and short-term debt has a significant impact on returns.

METHODOLOGY

Statistical sampling and statistical research community

Research community, accepted all the companies on the Tehran stock exchange. The sample of this research includes those of the companies accepted in the Tehran stock exchange that their stake in the timeframe 2001-2011 actively traded is located but knockout and sampling method according to the following priorities are selected:

Only companies that in the 2001 to 2011 stock they traded on the Tehran stock exchange and is also a member of the stock exchange.

Due to having more flexibility of comparison of result, financial year end of companies should be by the end of March each year and don’t have change over the course of the fiscal year during the review. The necessary information is available for that company.

Companies are manufacturing and are not composed of investment companies, financial intermediation, insurance industry, the holding company and the Bank accepted in the Tehran stock exchange. During the period reviewed, at least once have attempted to issue stock and borrowing.

The number of samples according to the number of the companies accepted on the Tehran stock exchange and knockout approach is 116 companies.
**Research Variables**

**Dependent variable**

Stock Returns: stock returns means price changes of first and last course of shares plus other income arising from the purchase of a share, such as: the benefits arising from the right of way cash bonus shares and the stock profits, divided by the share price at the beginning of the course (Noravesh and Heydari, 2004). With regard that the Organization of the Tehran Stock Exchange calculate and publish stock returns by the reports over the course of each year from accepting company on the Exchange; therefore, this figure is also obtained without doing additional calculations.

\[
RET_t = \frac{(stock\ price - base\ price) + DPS + Preemptive\ right + Bonus\ stock\ profits}{(Increase\ percent\ from\ the\ capital\ base \times 1000) + base\ price} \times 100
\]

DPS: the amount of cash dividends granted to ordinary shareholders after approval in general meetings.

\[
\sum_{i=1}^{n} \frac{DPS\times current\ capital}{base\ capital}
\]

Stock price: The closing share price on the day.

Preemptive right price: priority price on the day. If that day priority is not traded in the market (1000 - price per share) will be used.

Price difference: the daily difference between the share price with a day basis

(price per share of the day - Base price)

Base price is the first trading day prior to the date on this report. For example, if a report from 01/01/2010 to 29/12/2010 shall be prepared, base price is, the last price before the date 01/01/2010.

Base price: The final share price on the last day before the start of the range report if provide report in (selective, cash, the industry and the company's top 50 class or the entire companies), price difference column removed and replaced the column base price.

**B) Independent variables**

1. Total Accruals: total accruals item order means total working capital accruals items and working non-capital accrual items. In the present study to measure the accruals items, model Georgios, et al (2011) has been used. Total accruals items based on user model is calculated as follows;

\[
TACC_t = CACC_t + NCACC_t
\]

\[
TACC_t = \sum_{i=1}^{n} \Delta(CA_t - C_t) - \Delta(CL_t - STD_t)
\]

\[
CACC_t: Working\ capital\ accruals
\]

\[
NCACC_t: \ Non-cash\ working\ capital\ accruals
\]

\[
CA_t: Current\ assets
\]

\[
C_t: Cash\ and\ equivalents
\]

\[
CL_t: Current\ liabilities
\]

\[
STD_t: Short-term\ debt
\]

\[
NCACC_t = \Delta(TA_t - TA_t) - \Delta(TL_t - CL_t - LTD_t)
\]

\[
TACC_t: Total\ assets
\]

\[
TL_t: Total\ liabilities
\]

\[
LTD_t: Long-term\ debt
\]

2. Changes in equity: The purpose of the difference between total assets and total liabilities changes to deduction of net profit. In this study Georgios, et al (2011) model has been used to measure the equity. Equity based on the aforementioned model is calculated as follows:

\[
\Delta EQUITY_t = \Delta(TA_t - TL_t) - NI_t
\]

\[
NI_t: Net\ income
\]

\[
\Delta EQUITY_t:\ changes\ in\ equity
\]

3. Change in short-term debt: it means the short term financing incoming. In this study model Georgios et al (2011) has been used to measure the short-term debt. Short-term debt based on the aforementioned model can be calculated as follows:

\[
\Delta SDEBT = \Delta(STD_t)
\]

4. Change in long-term debt: Change in long term financing is received. In this study Georgios and colleagues (2011) model have been used to measure the long-term debt. Long-term debt based on the aforementioned model is calculated as follows:

\[
\Delta LDEBT = \Delta(LTD_t)
\]
C) Control Variables

In a research effect of total variables on each other cannot be studied simultaneously. So the researcher controls and neutralizes some of the effects of variable.

In this research variable of company size of the Georgios et al (2011) and Fonseka et al (2012) and the ratio of the value of book to the market value of BVMV from Georgios et al (2011) researches as control variables are considered.

Company size: size index of the model is investigated is obtained by using the natural log of total assets.

The Book to market ratio: The book value of equity at year-end t to market value of equity in year-end t is calculated.

Test model of research hypotheses

To test the hypothesis that the first two regression models introduced by Georgios et al (2011) that the following are used:

\[
RET_i = \beta_0 + \beta_1 \text{Size}_i + \beta_2 \text{BVMV}_i + \beta_3 \Delta \text{EQUITY}_i + \beta_4 \text{TACC}_i + \epsilon_i
\]

\[
RET_i = \beta_0 + \beta_1 \text{Size}_i + \beta_2 \text{BVMV}_i + \beta_3 \Delta \text{SDEBT}_i + \beta_4 \Delta \text{LDEBT}_i + \beta_5 \text{TACC}_i + \epsilon_i
\]

Test hypotheses and findings

Descriptive statistics research

In this paper, initially by using the raw data, variables of the study have been calculated and then descriptive statistics, including mean, median, maximum, minimum and standard deviation are computed and the research data (Table 1) are presented.

<table>
<thead>
<tr>
<th>Variables</th>
<th>mean</th>
<th>median</th>
<th>maximum</th>
<th>minimum</th>
<th>Std.dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>RET</td>
<td>33.18</td>
<td>12.32</td>
<td>734.14</td>
<td>-79.52</td>
<td>77.83</td>
</tr>
<tr>
<td>SIZE</td>
<td>5.6</td>
<td>5.54</td>
<td>7.99</td>
<td>-2.7</td>
<td>0.61</td>
</tr>
<tr>
<td>BVMV</td>
<td>0.58</td>
<td>0.46</td>
<td>5.55</td>
<td>0.01</td>
<td>0.47</td>
</tr>
<tr>
<td>EQUITYΔ</td>
<td>0.69</td>
<td>0.12</td>
<td>337.98</td>
<td>-77.62</td>
<td>0.33</td>
</tr>
<tr>
<td>S DEBTΔ</td>
<td>1.2</td>
<td>0.12</td>
<td>223.23</td>
<td>-9.04</td>
<td>0.09</td>
</tr>
<tr>
<td>L DEBTΔ</td>
<td>1.5</td>
<td>0.14</td>
<td>563.58</td>
<td>-1</td>
<td>1.99</td>
</tr>
<tr>
<td>TACC</td>
<td>0.43</td>
<td>0.19</td>
<td>23.62</td>
<td>-1.86</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Source: Calculations of researcher

Table (1) shows that the return on equity of -79.52 to 734.14, between -1.86 and 23.62 total accruals, changes in equity of -77.62 to 337.98, changes in short-term debt of -9.04 to 223.23, changes in long-term debt of -1.86 to 23.62 has changed. Standard deviations of changes from the standard deviation changes in long-term debt are more than standard deviation changes in short-term debt and equity changes. Thus, the dispersion around the mean value of changes in long-term debt represents more value.

Table 2. Results of test model of the first hypothesis

<table>
<thead>
<tr>
<th>Variables</th>
<th>coefficient</th>
<th>t-statistics</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>-3.527563</td>
<td>0.960406</td>
<td>0.3371</td>
</tr>
<tr>
<td>BVMV</td>
<td>-38.15933</td>
<td>-7.948025</td>
<td>0.0000</td>
</tr>
<tr>
<td>ΔEQUITY</td>
<td>-0.089710</td>
<td>-0.465948</td>
<td>0.6413</td>
</tr>
<tr>
<td>TACC</td>
<td>-2.977935</td>
<td>-1.789230</td>
<td>0.0738</td>
</tr>
<tr>
<td>C</td>
<td>37.09900</td>
<td>1.804032</td>
<td>0.0715</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.053906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>0.050629</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Statistic</td>
<td>16.45219</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob(F-Statistic)</td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.960624</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculations of researcher

The determination of adjusted coefficient (adjusted R²) resulted from the test model has been 0.050629. This figure shows that about 5% of the dependent variable changes; the real efficiency of the company’s stock and control by independent variables sample contained in the model can be described. To check lack of autocorrelation caused by errors of the model, Durbin-Watson has been used. The optimal amount of it for its lack of autocorrelation is 2. If the value of this statistic is 1.5 to 2.5, its autocorrelation in the model error values will be rejected. According to the Durbin-Watson statistics of the amount of the resulting model of research is 1.96, its autocorrelation; in the values of the model error is rejected. After reviewing the model being significant to the analysis of hypothesis and being significant coefficients will be considered. The
relevant statistics to determine the coefficients significant is a statistic t static. This test determines significant coefficients, in addition to its effect on the dependent variable coefficients as well. According to the results presented in table number (2) statistics t of the first hypothesis related to the independent variable and its significance level (p-value) is 0.0738 and -1.78 respectively. With regard to results presented in table number (2), t statistic related to the first independent variable hypothesis and its significance level (p-value) are 1.78- and 0.0738 respectively. According to this that the error level of 0.05 was considered for this study, so accrual has no significant effect on the real return on stocks. Thus, the first hypothesis is not confirmed.

THE FIRST HYPOTHESIS TEST RESULTS

The first hypothesis of research examine the impact of the accrual items after external financing activities of enterprise on stock returns. Statistical assumption about this hypothesis is as follows:

\( H_0: \) Accruals, has no significant effect on stock returns following external financing activities through equity.

\( H_1: \) Accruals, has significant effect on stock returns following external financing activities through equity.

In the hypothesis dependent variables is the real efficiency of shares, and independent variable, the accruals items and changes to the equity. As can be seen in the table (2), F-statistics with confidence level 99% is meaningful. Because p-value result from test of the model has been less than 5%. Therefore, research model has been significant on the whole and the independent variables have the ability to explain the dependent variable.

THE SECOND HYPOTHESIS TEST RESULTS

The second hypothesis of the study investigate the effect of accruals after financed activities through short-term debt and long-term debt on stock returns. The statistical assumptions of the theory are as follows:

\( H_0: \) Accruals, has no significant effect on stock returns following external financing activities through short-term debt and long-term debt.

\( H_1: \) Accruals, has significant effect on stock returns following external financing activities through short-term debt and long-term debt on stock returns.

In this hypothesis, the dependent variable is real stock returns and the independent variables, accruals and changes in short-term debt and long term debt. As shown in Table (3), the F-statistic is significant at the 99% confidence level. The p-value was less than 5% of the test model. Thus, the overall research model was significant and independent variables are able to explain the dependent variable.
the company reviewed the accrual didn’t have significant business success after financed activities outside of the Organization to earn the necessary returns to shareholders. Among the reasons for this is perhaps a lack of attention to the capital market to information relating to the financing activities reported in the case of financial flows and uncertainty towards the efficient use of the funds by manager can cause an uncertain reaction from the market because of the financing phenomenon; and perhaps because it is related to the investment. Basically, there is this thinking that the financing activities led to investment or at least with the activities of the investment is in the relationship. Maybe ambiguity about the end result with the use of the funds is providing one of the reasons for the market's uncertain reaction to the financing of activities. As regards the financing of companies in Iran are mainly debt through the banking system and this fact is not raised in terms of the granting of banking facilities, the level of stock market price, so we don't expect the confirmation regarding the financing of the debt place; as well as the accruals items is subject to manipulation of the management and subject to error in measurement and the estimate, has low reliability. The results of the assumptions match with results of research of Khajavi And Nazemi (2005), Yan Yanchishmah and Babajani (2011) and Rahnamye Roudposhti et al (2009), and with the results of the Fonseka et al (2012), Morad Zadeh and Nade Ali (2009) and Dastgir and Rastegar (2011) do not match. Failing to comply with the Fonseka et al (2012) is that, this hypothesis, have been reviewed on the population of China companies in the period 2000 to 2009; Reason of mismatch of results of Moradzadeh And Nade Ali (2009) research is that a pure cash from the financing flows and uncertainty towards the efficient use of the funds by manager can cause an uncertain reaction from the market because of the financing phenomenon; and perhaps because it is related to the investment.

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