Investigation on the Relationship between the Quality of Accruals and External Financing in Tehran Stock Exchange Listed Companies

Author's Details: K. Azinfar and M. Jafarian
1Department of Accounting, Islamic Azad University, Babol Branch, Babol, Iran
2Department of Accounting, Islamic Azad University, Babol Branch, Babol, Iran

Corresponding Author: M. Jafarian

ABSTRACT

Present study, using panel data, investigate the relationship between quality of accruals and external financing in 182 listed firms of Tehran Stock Exchange (TSE) during 2009 to 2013. In this study, modified Dechow et al. (2002) model has been used as criterion for quality of accruals. The results show that there is a positive and significant relationship between quality of accruals and external financing. That is, higher quality of accruals can result in higher expectation for external financing.

Key Words: Quality of Accruals, External Financing, Tehran Stock Exchange.

INTRODUCTION

Accounting profit consists two major parts. One part is liquidity and another part is accruals. Accruals part is much important in company’s performance evaluating. Earned cash during a financial period is not considered as a relevant information. Since recognized cash has timing and matching problems which can lead to incorrect company's performance measurement (Rozef, 2010). Accruals are significant indexes for earnings quality detection and is functional in stock evaluating. Accruals can be divided as discretionary and non-discretionary accruals. Discretionary accruals are those items which management can impose some controls on them but, non-discretionary accruals are items which management cannot have any controls on them (Goodman, 2007).

Finance means provision of financial resources and required funds to continue corporate activities, planning and running development and revenue-creation programs of these economic units. Finance is mainly performed through stock issuance, securities sell and receiving loans and credits (Haw et al, 2014). Financing through liabilities is a more desirable way of providing required funds compared to stakeholders’ expected returns, due to tax savings and lower profit rates. But, what is important for creditors and loaners about lending credits is the ability of the loanee to pay back the loan and received credits according to their interests. Generally, a strategy adopted by creditors to assess pay back ability is to review companies’ financial statements among which income statement (loss and profit statement) and, specifically, profit rate prior to interest is considerably significant.

Furthermore, numerous factors influence profit quality some of which are inherent and obligatory while others are arbitrary. One of the arbitrary factors affecting profit quality is liabilities of a company. There are various viewpoints on the relationship between financing through liabilities and profit quality involving direct linear, reverse linear and nonlinear types of relationships (Pedro, et al, 2014). Direct linear approach suggests that profit quality improves by increase liabilities level since creditors appeal for audited financial statements and the higher is the quality of presented information, the easier the credits are donated (Haw et al, 2014). Thus, a significant control is exerted on credit receivers and this leads to presenting more accurate and high quality information. Reverse linear approach holds that in order to receive credit, managers tend to manipulate corporate financial information express more desirable financial status. As a result, increasing liability level reduces information quality.

Nonlinear approach indicates that it is not possible to assume a stable linear relationship between financing though liability and profit quality because of accuracy of reasons presented in the two aforementioned approaches, but a kind of quasi-parabolic relation holds as a combination of direct and reverse linear approaches. In general, the present paper aims to investigate quality of arbitrary commitments, finance and bank liabilities. The answer to this question seems be useful for executive and non-executive managers of companies and effective, potential and institutional investors and independent audits (Rozef, 2010). Considering these, the main objective of the present research is to examine the relationship between accruals quality and access to finance through bank in Tehran Stock Exchange listed companies.

Research Background

Theoretical background (framework)

Accounting accruals convert cash flows to net profit through adopting costs and revenues in a certain period, regardless of their occurrence time. The accruals represent managers' expectations of future events; hence, are likely to possess some amounts of measurement error. In addition, they may face deviations as a consequence of management intentional manipulations (earnings management) or insisting on personal views. Thus, investors need to suffer considerable costs of information processing to gain a full understanding of value meaning of accruals. Investors who
act slowly in this process of understanding will not gain an accurate value of these in the current year (Georgios et al, 2011).

Moreover, the main portion of the incorrect accrual value creation may be attributed to abnormal accruals. The incorrect accrual value creation indicates the fact that, on average, investors are not capable perceiving information available in the accruals. As a consequence, a certain group of aware investors such as individuals inside an organization may benefit from the incorrect value creation lead their commercial activities toward profitability. Respecting what stated so far, accruals may be expected to generate information heterogeneity in the market, enhance aware investors' informational preference and lead to information asymmetry in the market (Goodman, 2007).

Therefore, accruals can be defined as the difference between profit and operational funds and separated into various subsets. Accruals are divided into arbitrary and non-arbitrary items in one classification and into current and non-current one in another. Current accruals are of short-term nature with higher turnover and influence accounts of working capital, whereas non-current accruals have no impact on these accounts and, hence, are seemingly playing a different role in improving the relationship between profit and corporate value.

**Experimental Background**

Dechow and Dichev (2002) investigate the relationship between accruals quality and earnings (the role of accrual estimation errors). This paper proposed a novel measurement of an aspect of revenues and capital accrual quality. A role of accruals is to change or adapt recognition of cash flows in a certain period in order that the adapted figures (revenues) may be able to measure corporate performance in a better manner, although, accruals require hypotheses and estimations of cash flow. They discussed that revenues and accruals quality tend to descent in the estimation error range. They presented an experimental measurement of accruals quality. If regression remaining is confined to past, present and future variations in working capital, working cash flows are the same. They demonstrated that observable corporate specifications may be used as tools to evaluate accruals quality (such as revenues and accruals volatility). Finally, they proved that our measurements of accruals quality are positively related to revenue stability.

Goodman (2007) investigates the relationship between abnormal accruals and external finance. While investors decide about corporate external finance, show interest to abnormal finance. Evidence of the present paper demonstrates that abnormal accruals satisfy investors by being capable of predicting company's future cash flow. Creditors assign positive weight to those abnormal accruals increasing future corporate cash flow and when the items are highly informative, creditors decide based abnormal accruals.

Qi and Zhang (2010) study the relationship between accruals, bond liquidity and liability cost. The accruals quality not only reduces information asymmetry, but also decreased doubt and uncertainty and, therefore, improves liquidity. Results indicated a positive correlation between accruals quality and bond liquidity. Namely, an increase in the former also enhances the later. Besides, it is found that accruals quality decreases liability cost.

Ghosh and Moon (2010) discuss the relationship between liability-based finance and profit quality. They used accruals to measure profit quality. Liability may have a positive impact on profit since managers make use of information recognition to present confidential information on corporate future perspective on reducing finance costs. Thus, findings showed that there is a negative relationship between liability finance and profit quality in lower liability levels, but in higher levels, the negative relationship exists between the two variables.

Georgios et al (2011) study the relationship between accruals and stock return performance, considering foreign finance. The research aimed to study the relationship between abnormalities in foreign finance and in accruals by considering capital and long-term accruals. They presented that foreign finance stock packet used against accrual not only leads to higher returns, but also provide more arbitrage opportunities. Measures of foreign finance are highly capable of predicting stock future returns, an ability which decreases after controlling long-term accruals.

Shan et al (2012) discuss the effect of foreign finance on unexpected accruals through management profit or estimation error. In this research, they used the model developed by Gong et al (2008) for hypotheses testing. Results indicated that managers' normal operational decisions are correlated with pure activities of foreign finance and lead to statistically and economically significant estimation errors in unexpected accruals. Moreover, unexpected accruals are correlated with variations in pure activities of foreign finance.
García-Teruel et al (2014) study the role of accruals quality in access to bank liabilities. The research analyzed the effect of accruals quality on corporate access to bank liabilities in panel data of small and medium-size Spanish companies. Results showed a significant correlation between accruals quality and bank liabilities, even if other determinants of bank liabilities are controlled. Moreover, there is a significant internal relationship between bank liabilities and accruals quality suggesting that more accuracy of revenues results in a reduction in information asymmetry with banks and facilitates corporate access to bank loans.

Pedro et al (2014) investigated the relationship between accruals quality and foreign finance. The research aimed at examining the effect of accruals quality on accessing bank liabilities. The research population was composed of all listed companies in Spain Stock Exchange. According to results of Hypotheses testing, a positive correlation is inferred between accruals quality and bank liabilities. Even though other determinants of bank liabilities and exogenous nature between it and accruals quality were controlled, the higher is the accuracy of profit, the more reduced is information asymmetry and this leads to corporate access to bank loans.

**Hypothesis**

According to the research literature and in order to achieve the research objectives, a main hypothesis is presented:

H1: There is a significant relationship between accruals and finance through bank.

**Method**

Present study using panel data to investigate the relationship between the quality of accrual and external financing in Tehran Stock Exchange (TSE) listed companies by using the following model:

**External Finance**

\[
BankDebt_{i,t} = \alpha_0 + \beta_1 AccrualsQuality_{i,t} + \beta_2 LEV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 ROA_{i,t} + \beta_5 AGE_{i,t} + \epsilon
\]

(1)

**BankDebt_{i,t}**: Bank debt  
**AccrualsQuality_{i,t}**: To calculate accruals quality, Dechow et al (2002) model is used.  
**LEV_{i,t}**: Total Debt divided by total assets  
**SIZE_{i,t}**: Natural log of total assets  
**ROA_{i,t}**: Net income divided by total assets  
**AGE_{i,t}**: Natural log of the number of years that the firm has been publicly traded

Dechow et al (2002) model:

\[
TCA_{i,t} = \alpha_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 \Delta REV_{i,t} + \beta_4 PPE_{i,t} + \epsilon
\]

(2)

**TCA_{i,t}**: Total accrual  
**CFO_{i,t}**: Cash flow from operation  
**\Delta REV_{i,t}**: Change in revenue  
**PPE_{i,t}**: Property, plant, and equipment
\( \varepsilon \): Estimation error

\[
TCA_{i,t} = \Delta CA - \Delta CL - \Delta Cash + \Delta LTDEBT
\]  

\( \Delta CA \): Change in current assets  
\( \Delta CL \): Change in current liabilities  
\( \Delta Cash \): Change in cash  
\( \Delta LTDEBT \): Change in long-term liabilities

**Data and Summary Statistics**

We select our sample of IRAN nonfinancial firms with available financial data from Tehran Stock Exchange (TSE) during 2010-2014. We exclude financial firms and firms which their financial data is not available. All other control variables are winsorized at the 1% level. Our final sample has 1880 firm–year observations.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
<th>Std dev</th>
<th>OBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accruals Quality</td>
<td>0.342</td>
<td>0.714</td>
<td>-0.175</td>
<td>0.616</td>
<td>910</td>
</tr>
<tr>
<td>BankDebt</td>
<td>7.748</td>
<td>12.415</td>
<td>3.625</td>
<td>3.391</td>
<td>910</td>
</tr>
<tr>
<td>LEV</td>
<td>0.343</td>
<td>0.869</td>
<td>0.102</td>
<td>0.555</td>
<td>910</td>
</tr>
<tr>
<td>SIZE</td>
<td>30.745</td>
<td>39.625</td>
<td>21.044</td>
<td>11.032</td>
<td>910</td>
</tr>
<tr>
<td>ROA</td>
<td>0.392</td>
<td>0.811</td>
<td>0.158</td>
<td>0.701</td>
<td>910</td>
</tr>
<tr>
<td>Age</td>
<td>12.3</td>
<td>19</td>
<td>4</td>
<td>4.8</td>
<td>910</td>
</tr>
</tbody>
</table>

This table provides summary statistics for the variables in our sample of firm-years from Iran-based publicly traded firms over the period 2010 to 2014.

**Empirical Results**

**Bank Debt Model Estimation**

The first presented model in this research is Bank Debt model that is assumed, there is a significant relationship between accruals and bank debt (external financing). The estimation of Bank Debt model is presented in below table.

| Variables        | Coef.  | t-value | p-value 
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.403</td>
<td>5.841</td>
<td>*0.009</td>
</tr>
<tr>
<td>Accruals Quality</td>
<td>3.526</td>
<td>8.771</td>
<td>*0.000</td>
</tr>
<tr>
<td>LEV</td>
<td>5.624</td>
<td>7.409</td>
<td>*0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.748</td>
<td>-4.348</td>
<td>*0.014</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.662</td>
<td>-2.536</td>
<td>*0.049</td>
</tr>
<tr>
<td>AGE</td>
<td>2.484</td>
<td>4.451</td>
<td>*0.032</td>
</tr>
<tr>
<td>D.W</td>
<td>2.318</td>
<td>F. Statistic</td>
<td>74.158</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.496</td>
<td>Prob(F. Statistic)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Error level at 5%
According to table 2, D.W statistic is 2.3 which shows that there is no error correlation between variables. Estimated coefficient of accruals on external finance is 3.526 which shows that there is a positive and significant relationship between them. That is, there is a significant relationship between accruals and financing through bank. Furthermore, Independent and control variables can predict about 46.6% changes in dependent variable and F statistic significance level shows that, the applied model in this study is significant at 1% error level. The empirical model of this study is as follow:

$$
BankDebt_{i,t} = 0.403 + 3.526AccrualsQuality_{i,t} + 5.62LEV_{i,t} + 0.748SIZE_{i,t} \\
+ 0.662ROA_{i,t} + 2.484AGE_{i,t} + \varepsilon
$$

**Conclusion**

The present paper explored the relationship between accruals quality and foreign finance in Tehran Stock Exchange (listed companies). Results of hypotheses testing using Model 1 show a positive and significant relationship between the two variables and this is consistent with findings of Pedro et al (2014), García-Teruel et al (2014) and Georgios et al (2011) and opposes those of Qi and Zhang (2010). Findings indicate that the more improve is the quality of accruals of a company, the company may be increasingly expected to finance through a local bank. Respecting what mentioned so far, it is concluded that companies are more tended to finance from outside of the organization (banks) when a difference appears between accounting profit and its cash components since the difference between cash flows timing and transaction recognition scheduling may increase accruals quality and this leads to an expected improvement in foreign finance rate.

**Reference**


