The relationship between accounting information quality with discretionary accruals and stability of earnings

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Abstract
In this study, the relationship between financial reporting quality and discretionary accruals and earnings stability is investigated. For this purpose the data of listed companies in Tehran Stock Exchange during the period 2007 to 2012 are used. To measure the quality of financial reporting, SEC classification in the related area is used. Results showed that companies that provided high quality information had lower discretionary accruals in comparison to low quality firms. But in analyzing the stability of earnings, no significant differences between high and low quality firms was found.

Key words: quality of financial reporting, stability of earnings, discretionary accruals.

1. Introduction
According to the conceptual framework and theories that were provided by Financial Accounting Standards Board in recent decades, the primary objective of financial accounting and reporting is to provide useful information for economic decisions made by users of financial (FASB, 1978). Investors as the major suppliers of corporate resources are seeking complete and accurate information about financial status of companies. This kind of information is reflected in the financial statements of the companies and investors use this information consistently without adjusting them according to accounting methods that were used in the companies or without considering how this information is obtained (Hendriksen, 1982).

One of the fundamental preconditions for ensuring investors and creditors for participating in economically productive activities is providing and presenting information that is useful for them in making economic and financial decisions. Providing different mechanisms to assure investors and other users of financial information about the quality of financial information is an essential rule which leads to efficiency of the capital markets and optimum allocation of capital.

Accounts who provide fair information, have a crucial role in increasing the quality of existing information (Saghafi and Ebrahimi, 2009).

The purpose of accounting and financial reporting is to supply demands and needs of intended users of the financial information. The main tool for conveying information to users and external entities is providing basic financial statements. Income statements are one of the basic financial statements that have crucial importance in the task of assessing the stewardship or accountability of management for the resources that they have at their disposal. Income statements contain the return resulted from resources controlled by the entity's management and reflects entity's performance during certain periods. Because entity's management is responsible for preparations of financial statements, the directors have direct access to information and the right to choose the optional methods of accounting, so the possibility to change the discretionary accruals and earnings management exists.

The low frequency and consistency of earning is an indicator of earning’s quality. Thus, most investors invest in shares of companies which have stable earnings and assumed to have high quality of information.

2. Background research
Saghafi et al (2011) studied the interrelationship between the quality of Accounting Information, excessive investment and free cash flow in companies listed on the Stock Exchange of Tehran. The results indicated that higher quality of corporate accounting information resulted in less excessive investment and this occurs more in companies with high rate of free cash flow and the effect of high quality information on reduction of excessive investment is greater in these companies.
Saghafi and Arab Mazar Yazdi (2010) did an empirical test on the relationship between investment performance and the quality of financial reporting. Research results showed that in the Tehran Stock Exchange there is practically no significant correlation between the variables.

Arab Mazar and Talebiyan (2009) examined the impact of financial reporting quality (using accruals quality index) and risk information on the capital expenditures of listed companies in Tehran Stock Exchange during 2001 and 2005. Their findings indicate that the cost of capital (cost of dept and cost of equity) companies with lower accruals quality is more than the cost of capital companies with higher accruals quality. More than that, according to findings of this research the impact of discretionary accruals quality on cost of company’s capital is more than the impact of Non-discretionary (essential) accruals quality on cost of company’s capital.

Meshki and Norodydeh (2012) investigated the effects of earning smoothing on the stability of company’s earnings. The results showed that the stability of company’s earnings is greater for cash flow in comparison to stability of accruals. Also, the stability of company’s earnings with no earning smoothing is greater than their usage in maturation and fall-off stages but the usage rate in maturation stage is greater than fall-off stage. Mosley et al (2012) examined how the stability of company’s cash earning with respect to discretionary accruals was created by components of cash dividends. The results showed that the stability of earnings in maturation stage is greater than fall-off stage.

Mahfozi and peikarnegar (2011) examined the relationship between accruals quality and price concurrency (scale to measure relative firm-specific information, which is reflected in the price) in the Tehran Stock Exchange listed companies. The results showed that discretionary accruals quality for listed companies in Tehran Stock Exchange has a direct relationship with the price of concurrency. Osta and Qytasy (2012) examined whether the life cycle of an entity has any effect on the usage rate of discretionary accruals. The results showed that the use of discretionary accruals is different at different stages of the life cycle. This means that the usage rate of these items in growth stage is more than their usage in maturation and fall-off stages but the usage rate in maturation stage is greater than fall-off stage.

Meshki and Noordydeh (2012) investigated the effects of earning smoothing on the stability of company’s earning. The results indicated that the stability of earnings in companies with earnings smoothing is more than the stability of earnings in companies with no earning smoothing. Also, companies that have attempted to smooth earnings, compared with other companies have showed more stability contribution in the future.

Ahn and Kwon (2010) examined the stability of the earnings and market reaction in the stock market of Korea over the period 2000 to 2008. Their results showed that high level of stability of earnings in the Korean stock market and this stability of earnings is greater for cash flow in comparison to stability of accruals. Also, the Korean stock market participants typically show more reaction to the stability of cash flows earnings than the stability of accruals earnings.

3. Theoretical and research hypotheses
3.1. Quality of Accounting Information

The main objective of financial statements is to provide relevant information about the company’s financial and operational condition to help investors and creditors in making important financial decisions. The financial statements that fulfill this objective have good quality (Aboody & Hughes, 2005).
The quality of financial reporting refers to the extent to which, companies' financial reporting, economical condition and its performance over a certain period of time is measured and presented honestly (Khajavi et al., 2012). In other words, if managers comply neutrality and objectivity in presenting the items inserted in the financial statements, we can say that the financial reporting has high quality (Brandt et al., 2010).

3.2. Discretionary accruals

Accepted accounting principles authorize the managers to change the amount of reported earnings and always report an equal amount of earning in company’s financial statements. The most important factors are total accruals and discretionary accruals (Moghadam et al., 2012). The analysis of earnings management shows that management focuses on the usage of discretionary accruals. Discretionary accruals are accruals that cannot be described by the normal operation (Defond and Subramanyam, 1998). These are the accruals that are subjected to the management distortions and are unusual in nature (Stolowy And Gaetan, 2000). Discretionary accruals show the authority of the management in determining the time of identification and limitation of credit sales (Ahmadinejad, 2011). This leads to financial statements that do not disclose the actual situation of the company therefore the investors and users are unable to properly use these financial statements to make the right decisions which results in low quality of financial reporting.

Depreciation expense, investment income, earning and loss from the sale of fixed assets and depreciation of premiums and deductions of securities are examples of discretionary accruals.

3.3. Stability earning

Reported earnings are an important financial information that are considered by people in making financial decisions. Financial analysts generally consider reported earnings as a prominent factor in their evaluation and judgment. Also investors rely on financial information which are inserted in the financial statements of economic entities in making decisions for investment in companies, in particular, reported earnings. They believe that the fixed earnings compared to unfixed earnings guarantee higher dividend. Since the fluctuations of earning are considered as an important measure of the company’s overall risk, therefore, firms with smooth earning have lower risk for investment (Venus et al., 2006). Stability means the reproducibility (continuous) of current earnings. High stability of earnings shows that the company has more power to maintain current earnings and the quality of earnings is considered higher (Khajavi and Nazemi, 2005). Stability is of the qualitative characteristics of earnings in accounting that is based on the accounting information. Stability earning is a measure that helps the investors in assessing the company’s future earnings and cash flows. Investors rely more on stable earnings rather than unstable earnings in assessing future earnings and expected cash flows (Kurdistani, 1997).

According to what was presented the hypotheses are as follows:

- **H$_1$**: Firms that provide high quality accounting disclosures are likely to exhibit lower discretionary accruals.
- **H$_2$**: Stability of earnings in firms that provide high quality accounting disclosures has significant difference from stability of earnings in firms that have low quality accounting disclosures.

4. Research methods, Community and sample:

In this study, in terms of solidarity and the methodology is a quasi-experimental research in the field of positive research PAT and that is done with the actual data. This research in terms of nature and purposes is an applied one. Also this study is based on real information of stock market, financial statements, notes along the financial statements and the reports of assemblies companies. In this study the necessary information for forming the test hypothesis, is collected from financial statements, the Tehran Stock Exchange databases site, Rahavard novin databases. After choosing a sample from the available companies, Excel spreadsheet software is used for calculation of the data. For analyzing the data, regression models and R software were used.

The population for this study is the listed companies in Tehran Stock Exchange Market between the years 2008 to 2012. Firms that do not have the following conditions due to the limitations of the study will be removed:

1- Firms shouldn’t have changed the financial year in their financial statements; 2- Firms aren’t should'n be members of holding industries, because their nature is different from other firms; 3- Their financial information should be available; 4- Firms should be listed in Tehran Stock Exchange from March 19, 2009. 5- Information and data required for this research has been collected from various sources depending on the type of needed information. Information related to literature review and theoretical were collected from library sources and scientific databases and journals. The information required for this study is generally obtained from Rahavard novin software, Tehran Stock Exchange website, financial statements, reports that were published by the Tehran Stock Exchange.
Regression model is as follows:

\[ DAC_{i,t} = \alpha_0 + \alpha_1 AQ_{i,t} + \alpha_2 AQ_{i,t} \times OCF_{i,t} + \alpha_3 AQ_{i,t} \times LNA_{i,t} + \alpha_4 AQ_{i,t} \times ROA_{i,t} + \alpha_5 AQ_{i,t} \times TLSFU_{i,t} + e_{i,t} \]

Where:
- \( AQ_{i,t} \) is a dummy variable representing the quality of reported accounting information. \( AQ_{i,t} = 1 \) for firms reporting high quality accounting information and \( AQ_{i,t} = 0 \) otherwise,
- \( ROA_{i,t} \) is net income before extraordinary items scaled by total assets,
- \( TLSFU_{i,t} \) is total liabilities scaled by shareholders’ funds,
- \( OCF_{i,t} \) is operating cash flows scaled by total assets,
- \( LNA_{i,t} \) is the log of total assets,
- \( DAC_{i,t} \) is the discretionary accruals that are estimated using the cross-sectional Jones model (Jones, 1991).

The study uses the residuals of the following regression model as discretionary accruals (see also DeFond and Subramanyam, 1998; Bartov, Gul, & Tsui, 2001; Kothari, Leone, & Wasley, 2004; Garza-Gomez, Lee, & Du, 2006).

Second equation:

\[ AC_{i,t} = \alpha_0 (1/A_{i,t-1}) + \alpha_1 \Delta REV_{i,t} + \alpha_2 PPE_{i,t} + e_{i,t} \]

where:
- \( AC_{i,t} \) is accruals in year \( t \) scaled by lagged total assets, i.e. total assets in year \( t-1 \). Accruals equal the annual change in current assets (excluding cash) minus current liabilities (excluding short-term debt and income tax payable) minus depreciation,
- \( A_{i,t-1} \) is total assets in year \( t-1 \),
- \( \Delta REV_{i,t} \) is the annual change in revenues in year \( t \) scaled by lagged total assets,
- \( PPE_{i,t} \) is property, plant and equipment in year \( t \) scaled by lagged total assets,
- \( e_{i,t} \) is the error term.

Also speed of identifying the losses were analyzed because large losses are evidence for low earnings management (Lang, Radi and Wilson, 2005). The SP dummy variable as a measure of low earning (Lang, Linz and Miller, 2003; Barth, Lndsmam and Long, 2008) and dummy variable LL as a measure of timely loss recognition (Lang et al, 2003 and 2005) were used. The statistical model is as follows:

Third equation

\[ AQ_{i,t} = \alpha_0 + \alpha_1 ROA_{i,t} + \alpha_2 MVBV_{i,t} + \alpha_3 TLSFU_{i,t} + \alpha_4 OCF_{i,t} + \alpha_5 LNA_{i,t} + \alpha_6 SP_{i,t} + \alpha_7 LL_{i,t} + \alpha_{i,t} \]

where:
- \( SP_{i,t} \) is a dummy variable indicating a measure of small profits. \( SP_{i,t} = 1 \) if net profit scaled by total assets is between 0 and 0.01 and \( SP_{i,t} = 0 \) otherwise.
- \( LL_{i,t} \) is a dummy variable indicating a measure of timely loss recognition. \( LL_{i,t} = 1 \) if net profit scaled by total assets is less than −0.20 and \( LL_{i,t} = 0 \) otherwise. All other variables are defined as in Before the equivalences.

Negative coefficient \( SP_{i,t} \) shows that the firms who provide high-quality accounting information tend to manage their earning figures, i.e. they report negative figures more than positive figures. Positive coefficient \( LL_{i,t} \) shows that high-quality accounting firms are more willing to report large losses.

To test the second hypothesis, the model introduced by Paek et al (2007) was used. This model is tested by fitting the following regression model and analysis of the acquired statistics.

Fourth equation

\[ EARN_{i,t} = \alpha_0 + \alpha_1 EARN_{i,t-1} + e_{i,t} \]

where:
- \( EARN_{i,t} \): current period earnings before items unexpected;
- \( EARN_{i,t-1} \): earnings prior period before items unexpected;
- \( e_{i,t} \): residual regression model;

This test is performed using the collected data from sample companies for the financial years mentioned before, \( t \) (the coefficient of the independent variable) is the rate of stability earning during the course of the investigation.

To test the second hypothesis, the model introduced by Paek et al (2007) was used. This model is tested by fitting the following regression model and analysis of the acquired statistics.

fifth equation

\[ E_{i,t} = \alpha_0 + \alpha_1 E_{i,t-1} + \alpha_2 \times AQ_{i,t} \times E_{i,t} + e_{i,t} \]
Earnings Before Extraordinary Items:
AQ\textsubscript{i,t} is a dummy variable representing the quality of reported accounting information. AQ\textsubscript{i,t}=1 for firms reporting high quality accounting information and AQ\textsubscript{i,t}=0 otherwise, 
a\textsubscript{1} shows the stability of earning for firms with low accounting quality and \(a_1 + a_2\) shows the stability of earning for firms with high accounting quality.

6. Results
Table 1 shows the descriptive statistics for companies with high-quality accounting disclosure and for the companies with low-quality accounting disclosure. To test the hypothesis of the research the cross-sectional data obtained during the period of 2007 to 2012 is analyzed. Although to test some hypotheses such as the calculation of discretionary accruals in the first hypotheses previous period financial information has also been used. So the some of the information is related to 2006. 1026 year-company were observed. Descriptive statistics show that companies that with low quality accounting disclosures show high growth (MVBV) and companies with low quality accounting disclosures (LNA), show a high level of debt (TLSFL) and large changes net earnings (\(\Delta\text{REV}\)).

First hypothesis: Table 2 shows that the first hypothesis is confirmed, it means that companies that provide accounting disclosure with high quality have lower discretionary accruals. Table 2 shows that the coefficient AQ.TLSFU is not significant. AQ coefficient is negative for companies with high quality i.e. companies which provide high-quality accounting information have less accruals and therefore have less preference for earnings management. The positive coefficient for AQ.ROA and AQ.LNA indicates that companies with high quality of financial disclosure and low return on assets (ROA) and size (LNA), have little discretionary accruals.

Table 2: Results obtained from panel data model For equation 1

| Coefficients | Estimate Std. Error | t-value | \(Pr(|t|)\) |
|--------------|---------------------|---------|-------------|
| AQ\textsubscript{t} (0) | 1202821 | 981212 | 1.2259 | 0.220536 |
| AQ\textsubscript{t} (1) | -2669713 | 741991 | -3.5980 | 0.000336 *** |
| AQ\textsubscript{t} (0): OCF\textsubscript{t} | -1922259 | 816004 | -2.3557 | 0.018676 * |
| AQ\textsubscript{t} (1): OCF\textsubscript{t} | -1439294 | 459307 | -3.1336 | 0.001776 ** |
| AQ\textsubscript{t}0: LNA\textsubscript{t} | -209343 | 165886 | -1.2620 | 0.207247 |
| AQ\textsubscript{t} (1): LNA\textsubscript{t} | 496287 | 123539 | 4.0172 | 6.32e-05 *** |
| AQ\textsubscript{t} (0): ROA\textsubscript{t} | 1880163 | 971093 | 1.9361 | 0.053127 |
| AQ\textsubscript{t} (1): ROA\textsubscript{t} | 353882 | 165624 | 2.1367 | 0.032863 * |

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Table 3: Results obtained from panel data model for equation 2

| Coefficients | Estimate Std. Error | t-value | Pr(>|t|) |
|--------------|---------------------|---------|----------|
| PPEit        | 1.676747            | 0.030474| 55.023   | < 2.2e-16 *** |

Table 4: Results obtained from panel data model for equation 3

| Coefficients | Estimate Std. Error | t-value | Pr(>|t|) |
|--------------|---------------------|---------|----------|
| LNA          | 0.0406302           | 0.0052469| 7.7436   | 2.304e-14 *** |

The second hypothesis: The results in Table 5 and 6 show that the second hypothesis is rejected. This means that stability of earnings in high and low quality financial disclosure companies have no significant differences. To investigate this hypothesis, the fitted model was first used for companies with high quality of financial disclosure (AQ = 1) and then it was used for companies with low quality of financial disclosure (AQ = 0). Tables indicate that the significance of independent variables in the two tables is less than 0.5, so the coefficient of the two variables is statistically significant. The $a_i$ is 1 in both Tables. Therefore, there is no evidence to accept the hypothesis and we can argue that the stability of earnings in companies with high and low quality of financial disclosure have no significant differences.

Table 5: Estimated coefficients Otto regression models for corporate with AQ = 1

| Coefficients | Estimate Std. Error | t-value | Pr(>|t|) |
|--------------|---------------------|---------|----------|
| EARNi(t-1)   | 1.000e+00           | 4.286e-18| 2.333e+17 | <2e-16 *** |

Table 6: Estimated coefficients Otto regression models for corporate with AQ = 0

| Coefficients | Estimate Std. Error | t-value | Pr(>|t|) |
|--------------|---------------------|---------|----------|
| EARNi(t-1)   | 1.000e+00           | 4.669e-18| 2.142e+17 | <2e-16 *** |

7. Discussion and conclusions

This study investigated the aim of preparing high and low quality financial reports by firms listed in Tehran stock exchange. This study investigated whether there is a relationship between the discretionary accruals, the accruals that show the rate of earnings management, and the quality of accounting information. The study also investigated whether there is a significant difference between the stability of earnings in companies with high and low quality of financial disclosure or not. Companies that have high-quality financial disclosure are bigger so they have the capacity of being known in markets. Also, they show high liquidity and profitability measures which implies that they have good financial status, this encourages the managers to provide high quality information in order to impress investors. Companies with high information quality, have lower accruals therefore are less likely to manage earnings. Both high and low quality companies have high earnings, so stability of earnings do not differ between these two types of companies.
References


