

Income smoothing practices and empirical testing using discretionary accounting changes

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ABSTRACT

Financial statements of listed firms are analyzed by financial analysts and investors. In this case, the firms may suffer from stock price declines if they do not meet market expectations. Listed firms may not only have incentives to avoid income declines and losses, they also have incentives to meet or beat market expectations in order to prevent declines in stock price. Income smoothing (IS) is the intentional dampening of fluctuations about some levels of income that is considered to be normal for a firm. IS manipulation has a clear objective, which is to produce a steadily growing stream of income. In this study, income-smoothing practices of Indonesian listed companies are detected through empirical tests using discretionary accounting changes (DAC) as IS instrument. Sample firms are classified as smoothers and non-smoothers using income smoothing behavior index. Results show that possible motivations of DAC transactions are income smoothing. The two independent variables such as external audit quality institutional ownership have significant influence towards IS practices. But, the type of industry has no significant relationship towards IS Practices.

ABSTRAK

Laporan keuangan perusahaan yang terdaftar di bursa efek biasanya akan dianalisis oleh para analis keuangan dan investor. Dalam hal ini, perusahaan mungkin akan mengalami penurunan harga saham yang diperdagangkan jika laporan keuangan tidak memenuhi ekspektasi pasar. Perusahaan memiliki insentif untuk menghindari penurunan laba dan memenuhi ekspektasi pasar terhadap kinerja perusahaan, semua dilakukan untuk mencegah penurunan harga saham. Perataan laba adalah tindakan yang digunakan manajemen untuk mengurangi fluktuasi laba yang dilaporkan agar sesuai dengan target yang diinginkan perusahaan. Dalam studi ini, praktik perataan laba perusahaan yang terdaftar di Bursa Efek Indonesia akan dianalisis menggunakan instrumen perataan laba yaitu perubahan akuntansi diskresioner (DAC). Hasil penelitian menunjukkan bahwa motivasi transaksi DAC adalah perataan laba. Dua variabel independen seperti kualitas audit eksternal dan kepemilikan institusional berpengaruh signifikan terhadap praktik perataan laba. Namun, variabel tipe industri tidak memiliki hubungan signifikan terhadap praktik perataan laba.

1. INTRODUCTION

As suggested by the FASB's Statement of Financial Accounting Concepts No.1, the main objective of financial statements is to provide information that is useful to present for potential investors and others in making rational investment, credit and similar decisions. The usefulness of financial and other statements is affected by the quality of reporting. The quality of financial reports should be relevant (timely) and reliable (verifiable and unbiased). This

means financial statements are free of material misstatements due to errors and fraud. The result of this high quality information is that it is useful in analyzing the past and predicting the future. For capital markets to function efficiently and effectively, participants (including investors and creditors) must have confidence in the financial reporting process. Financial statement fraud, as we've all seen recently, is a serious threat to this confidence (Jonas & Blanche 2000; Schipper & Vincent 2003).

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A manager as a preparer of financial report should be able to communicate the information and safeguard its relevance and reliability. When manager's incentive is based on their companies' financial performance, it may be in their self-interest to give the appearance of better performance through income smoothing practices. In many companies, managers are compensated both directly (in terms of salary and bonus) and indirectly (in terms of prestige, future promotions, and job security) depending on a firm's income performance relative to some pre-established benchmark. This combination of management's discretion over reported income and the effect these incomes have on their compensation leads to a potential agency problem (Habib 2005; Mansor & Achmad 2009).

Beyond the management compensation problem, income smoothing practices may affect investors by giving them false information. Capital markets use financial information to set security prices. Investors use financial information to decide whether to buy, sell, or hold securities. Market efficiency is based upon the information flow to capital markets. When the information is incorrect, it may not be possible for the markets to value securities correctly. To the extent that income smoothing practices obscures real performance and lessens the ability of shareholders to make informed decisions, we can view income smoothing practices as an agency cost. As a result, financial reporting quality has been the subject of serious criticism in recent years (Bauwhede & Willekens 2003; Shuli 2011).

Income smoothing (IS) is defined as the intentional dampening of fluctuations about some level of income that is currently considered to be normal for a firm (Beidleman 1973). The IS practices will not only result on non real company financial reports but, in the long term, it could also lead to an extreme and complex manipulations to meet the increasing internal sales target and external stakeholders' expectation. Although it is highly risky, existing literature has documented evidences that company managers actively engage in IS practices. Furthermore, in comparison to their developed-country counterparts, IS practices in developing and emerging economies are higher (Habib 2005; Ismail et al. 2009). The multiple incentives of income smoothing practices might also have motivated Indonesian firms to manipulate their financial statements to have smoother income figures. Since Indonesia developing countries and has an emerging capital market (i.e. highly-concentrated ownership, developing legal

infrastructure), therefore it is important to examine the IS practices and also to identify factors affect the IS practice in Indonesian public listed company. Therefore the main objectives of this study are to verify the effect of IS instrument such as: discretionary accounting changes (DAC) to the IS practice, and to investigate the effect of companies' specific characteristic attributes (the institutional ownerships, type of industry and external audit quality) on the IS practices.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

As describe previously, IS Practice is defined as the intentional dampening of fluctuations about some level of income that is currently considered to be normal for a firm, In other words, income smoothing is the process of manipulating the time profile of income or income reports to make the reported income stream less variable, while not increasing reported income over the long run. Therefore, income smoothing practice has a clear objective, which is to produce a steadily growing stream of profits. Research in income smoothing practices has shown that there are plenty of tools available for income smoothing practices, especially when managers' interests are threatened. For example, for the purpose of manipulating share prices, managers of buyout firms have an incentive to 'understate' income through controlling the changes in revenues and depreciable capital, while managers of firms about to make an initial public offering have an incentive to 'overstate' income by exercising discretion in depreciation policies and bad debt allowances (Aflatooni & Nikbakht 2009; Stolowy & Barotov 2004).

Indeed, firms are known to change accounting estimates and accounting methods when they are close to debt covenant violation. Even firms that have violated debt covenants implement income-increasing accounting changes to improve their bargaining power for future renegotiation. In addition to these incentives for managers to engage in income smoothing practices, academic research finds that there are motivations for managers to circumvent regulatory requirements. For instance, banks are likely to overstate loan loss provisions and understate loan write-offs when they are close to the minimum capital requirement threshold. Having an incentive to obtain more benefits from import relief, firms may understate income during import relief investigation (Herman & Inoue 1996; Heflin et al. 2002; Tan & Jamal 2006)

The financial statements, including the com-

parative information for prior periods, are presented as if the new accounting policy had always been in use. Therefore, comparative information is restated in order to reflect the new accounting policy. The amount of the adjustment relating to periods prior to those included in the financial statements is adjusted against the opening balance of retained earnings of the earliest period presented. Any other information with respect to prior periods, such as historical summaries of financial data, is also restated (PSAK 25, paragraph 46). When a change in an accounting policy has a material effect on the current period or any prior period presented, or it may have a material effect in subsequent periods, an enterprise should disclose the following (PSAK 25, paragraph 49) :

1. the reasons for the change;
2. the amount of the adjustment for the current period and for each period presented;
3. the amount of the adjustment relating to periods prior to those included in the comparative information; and
4. the fact that comparative information has been restated or that it is impracticable to do so.

Moreover, accounting policy changes have been widely used to identify income smoothing in previous studies. The discretionary accounting changes was selected as smoothing instruments because they can give a material impact on reported earnings and are unlikely to be adopted without management consideration of the effects (Atik 2009; DeAngelo et al. 1994). According to the Indonesian Financial Accounting Standards (PSAK 25, paragraph 6), accounting policies are the specific principles, bases, conventions, rules and practices adopted by an enterprise in preparing and presenting financial statements. Users need to be able to compare the financial statements or enterprise over a period of time to identify trends in its financial positions, performance and cash flows. Therefore, the same accounting policies are normally adopted in each period. A change in accounting policy should be made only if required by the company's statute, or by an accounting standard setting body or if change will result in a more appropriate presentation of events or transactions in the financial statements of the enterprise.

Hypothesis Development

In this study, the discretionary accounting change is selected as a smoothing device for several reasons. First, accounting policy changes can have a material impact on reported income and, conse-

quently, are unlikely to be adopted without management consideration of the effects. Second, no assumption needs to be made concerning the magnitude of the discretionary component of an accounting change. In addition, findings in smoothing practices can be sensitive to the way the discretionary component is isolated. Accounting changes, however, provide a measure that is purely discretionary (Tan & Jamal 2006; DeAngelo et al. 1994; Callen et al. 2008). Accordingly, the hypothesis is stated as follows:

H₁: There is a significant relationship between the discretionary accounting changes and the level of income smoothing practices by Indonesian listed firms

Institutional Ownership

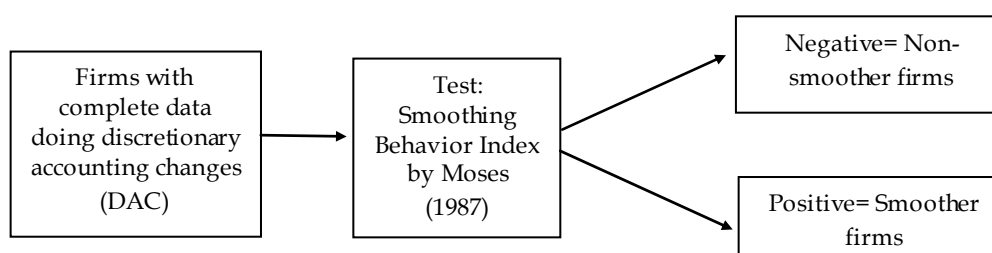
Institutional investor provides strong incentives for institutions to actively monitor and influence management actions. Their various policy decisions and institutional investors are also generally expected to be able to use current information to predict future earnings better than non-institutional investors. A study on institutional monitoring and opportunistic earnings management by Mansor and Achmad (2009) finds evidence that the presence of large institutional shareholdings inhibit managers from managing accruals to achieve desired level of income. Their results show that when managers have incentives to increase or decrease reported income as revealed from the cash-flow performance for current versus future periods, they accomplish the objective by using income-increasing or income-decreasing discretionary accruals to maintain a desired earnings stream. Koh (2005) and Siregar and Utama (2008) suggest that with the increase in shareholdings in a particular firm, institutional investors have strong incentives to monitor management to increase firm value by focusing more on long-term profitability instead of managing income on a year-by-year basis. Accordingly, the hypothesis is stated as follows:

H₂: There is a significant relationship between the IS practices and the institutional ownership in the company.

External Audit Quality

Several studies have examined the association between external auditor quality and earnings management. Research evidence suggests that the large audit firms are perceived to perform a higher audit quality than smaller audit firms. The type of auditors is selected as an explanatory vari-

Figure 1
The Sample Selection



able to determine whether the magnitude of IS practices is an effect of the type of auditors. The types of external auditors are categorized into groups; the “Big four” firms (Deloitte Touche Tohmatsu, KPMG, Ernst & Young, and Price Waterhouse Cooper) and “non- Big- four ” firms (other than the big four firm). The “Big four”, which operate throughout the world with high reputation, are expected to be unlikely involved in and associated with income smoothing practices. On the other hand, the “non-Big four” firms are hypothesized to be as less reputable and lower prestige is expected to have more tolerance with their clients (Kanagaretman et al. 2010; Kim et al. 2003; Krishnan 2003). External auditors’ size is used to measure external audit quality, where one for firms audited by Big 4 auditors (high audit quality) and zero for firms audited by non-Big 4 auditors (low audit quality). Accordingly, the hypothesis is as follows:

H₃: There is a significant relationship between the IS practices and the quality of external audit firms.

Type of Industry

Ashari et al. (1994) conclude that companies in different industries smooth their income in varying degrees. It appears that companies in certain industries (for example, industrial sectors are defined as peripheral industrial sectors by some researchers) face a more restricted opportunity structure and a higher degree of environmental uncertainty. It can be noted that the hotel, property and services sector in Indonesia is highly competitive and is very reactive to national economic and political events. Based on such argument, the hotel/properties, trading and services have an incentive for firm to smooth its reported income compared to other industry sectors. For this study, industrial sectors are categorized into industrial or manufacturing in line with classifications used by the Indonesia Stock Exchange. Therefore, the association between income-smoothing behavior of the sample companies and the industrial type is positively related. Two

dummy variables are used to capture the industrial or manufacturing sectors. The first dummy variable is used to categorize companies into the manufacturing type (1) and the others (0) for hotel/properties, trading, services and others. Accordingly, the relevant hypothesis is as follows: H₄: There is a significant relationship between the IS practices and the type of industrial sector of the company.

3. RESEARCH METHOD

The research methodology of this study is based on the study of Moses (1987) and Atik (2009) because it is the most applicable method for the data provided by Indonesia listed companies and there is no need to make estimations about the discretionary and non-discretionary parts of smoothing instruments. Moses (1987) and Atik (2009) accepts discretionary accounting changes (DACs) as income-smoothing instruments and thinks that firms try to smooth their income figures by using DACs. A discretionary accounting change can have a big impact on the reported income and cannot be done without management’s discretion. It is impossible to know real intents of managers therefore Atik (2009) assumes income smoothing to be one of the possible motivations of DACs rather than assuming the purpose of DACs is always income smoothing.

According to Moses (1987) and Atik (2009), smoothing was measured as the degree to which an accounting change shifts income toward expected income (EE). For each sample firm, the income number that would be reported had the firm that did not adopt the accounting change. This was determined and termed pre-change income (PE). A measure of smoothing behavior (SB) was calculated by comparing the deviations of pre change and reported income (RE) from expectations. Therefore PE, RE, and EE are all un-deflated measures and consequently dependent on firm sales was used here as a deflator. Based on this model income smoothing is measured as the degree to which an accounting change shifts income toward expected

Table 1
Discretionary Accounting Policies Changes

Description
Change in method/estimate of depreciation, amortization, capitalization policies: goodwill, foreign exchange, borrowing cost, plantation expenses, reclassification of fixed assets and others
Change in deferred taxation method
Change in inventory method
Change in income recognition method

Sources: Adapted and revised from PSAK 25; Moses 1987 & Muhammad 2001.

income (EE). The calculation of pre-change income (PE) is the income number that would have been reported had the firm not adopted the accounting policy change.

$$SB = \frac{|PE - EE| - |RE - EE|}{SALES} \quad (1)$$

Where:

SB = the smoothing behavior,

PE = the pre-change earnings,

EE = the expected earnings,

RE = the reported earnings.

A measure of smoothing behavior is calculated by comparing the deviations of pre-change and reported income from expectations. Since PE, RE, and EE are all un-deflated measures and consequently dependent on sales are used here as a deflator. A simple random walk model (SRWM), predicting income in any year as equal to reported income in the previous year, is used for the tests in this study. It is because the expected incomes depend solely on the most currently observed income (Atik 2009; Mohamad 2001). In this model, it is assumed that the management making discretionary accounting changes to keep the current year's income level at least equal to the last year. Smoother and non-smoother firms are distinguished by the sign of the amount that is generated by the application of the above formula. Positive values of SB mean the analyzed firm is an income smoother. Figure 1 shows the diagram of the sample selection.

Analysis to Determine the Direct Smoothing Instrument

The smoothing instruments are the variables used by managers in attempting to smooth particular accounting figures. According to Moses (1987) and Callen et al. (2008), an accounting practice or measurement rule must possess certain properties before it is used as a manipulative smoothing instrument. Therefore, for this research, the observations on the notes of financial statements refer to the changes in accounting policies.

Changes in Accounting Policies

Accounting policy changes have been widely used to identify income smoothing in previous studies. The discretionary accounting changes was selected as smoothing instruments because they can give a material impact on reported income and are unlikely to be adopted without management consideration of the effects (Atik 2009; Mohammad 2001; Herman & Inoue 1996).

According to the Indonesian Financial Accounting Standards (PSAK 25, paragraph 6), accounting policies are the specific principles, bases, conventions, rules and practices adopted by an enterprise in preparing and presenting financial statements. Users need to be able to compare the financial statements or enterprise over a period of time to identify trends in its financial positions, performance and cash flows. Therefore, the same accounting policies are normally adopted in each period. A change in accounting policy should be made only if required by the company's statute, or by an accounting standard setting body or if change will result in a more appropriate presentation of events or transactions in the financial statements of the enterprise. Table 1 lists the type of DAC.

Source of Data, Sample Selection, and Statistical Method

The population of interest selected for this study comprised firms listed on the Indonesia Stock Exchange and the DataStream database were used for the period of 2009 up to 2012. Refer to Stolowy and Bartov (2004) the term smoothing implies adjustments to income smoothing in two or more consecutive periods and it required analysis of data for at least four periods. The results of some studies suggest that an increase in the time period tends to reduce errors of misclassification of firms as smoothers and non-smoothers therefore this study has employed a four year series data collections (Atik 2009; Mohamad 2001).

The method of data analysis used is quantita-

Table 2
Firms Doing Discretionary Accounting (DAC) Changes by Year

Description	2009	2010	2011	2012
Change in method/estimate of depreciation, amortization, capitalization policies: goodwill, foreign exchange, borrowing cost, plantation expenses, reclassification of fixed assets and others	35	30	24	19
Change in deferred taxation method	6	4	5	1
Change in inventory method	8	3	6	4
Change in income recognition method	11	10	4	5
Total firms doing DAC	60	47	39	29

Source: Research Data.

Table 3
Smoother and Non-smoother Firms According to SRWM Model

Year	Total firms doing DAC	Smoother	Percent	Non-Smoother	Percent
2009	60	41	68%	19	32%
2010	47	31	66%	16	34%
2011	39	23	59%	16	41%
2012	29	12	41%	17	59%

Source: Research Data.

tive method, the sampling method is purposive sampling and the independent t-test was used to analyze the data. Each sample should have a complete financial annual report for each period observed. Then, the occurrence of discretionary accounting changes were scrutinized from the notes of financial reports and audit reports. These companies were then tested using the smoothing behavior model. After the test of the smoothing behavior model the researcher expected to get the result of the smoothers and non-smoothers for each year. T-Test was applied in order to find out whether significant differences between smoother and non-smoother firms exist according to each of the explanatory variables. Because the classification of smoother and non-smoother firms changed according to the model used to estimate expected earnings, t-test were applied for each smoothers and non-smoothers pair. Like Moses (1987) and Atik (2009), 90 percent confidence level has been selected. It predicted the direction of association between the variables and smoothing behavior, so they used one-tailed significance results to make evaluations. However, hypotheses of this study do not indicate the expected direction of the association and therefore two-tailed significance results were used.

4. DATA ANALYSIS AND DISCUSSION

The observation on the notes of the financial reports and auditor reports of the firms were made to find out the consistency of the selection of accounting methods. These observations were made

on financial reports to determine the tendency of using DAC. After going through the annual audit reports, the nature of the DAC was subsequently classified into four major categories according to their types as shown in Table 2. As seen in Table 2, managers mostly preferred to change their capitalization and/or expense policies, and then to change income recognition method. The third most prevalent DAC type is change in inventory valuation methods. From the sample of firms doing DAC selected in this stage, the researcher calculated an expected income number that the firms would use to smooth their income. Expected income is used as a reference point from which measures of the deviation of actual income can be developed (Atik 2009; Mohamad 2001). Positive values of smoothing behavior (SB) mean that the analyzed firm is an income smoother. By using a smoothing behavior index, firms were categorized as smoothers and non-smoothers. Table 3 shows the number of smoother and non-smoother firms that were determined according to simple random walk model (SRWM) model.

In order to find out whether significant differences between smoother and non-smoother firms exist according to each of the explanatory variables, independent Sample *t*-test were applied (Atik 2008; Mohamad 2001). Because the classification of smoother and non-smoother firms changed according to the each of the explanatory variables, *t*-test was applied for each smoothers and non-smoothers for 5 years. Like Moses (1987), 95 percent confidence level has been selected.

For independent sample t-test, if the variances are equal in both groups, then the p-value ("Sig.") will be greater than 0.05. However, if the p-value is less than 0.05, then the variances are unequal (Elliot & Woodward 2007). In this case, all the results have p-value greater than 0.05 for Levene's test, so researcher can conclude that the results are equal variances and researcher looks at the Equal variances assumed column result. Looking down this column from the result we can see that the group means are significantly different as the value in the "Sig. (2-tailed)".

Institutional Ownership and IS Practices

The relationship of institutional ownership and IS practice was hypothesized in this study as H2: There are no significant relationship between the IS practices and the institutional ownership in the company. Appendices present the result of the logistic regression for the effect of institutional ownership to IS practices. Institutional ownership had no significant effect for 4 years at $\alpha = 0.1$, $p = 0.257$ in 2009, $p = 0.132$ in 2010, but in 2011 have relationship ($\alpha \leq 0.1$) with $p = 0.082$ and also in 2012 has significant relationship at $p = 0.093$. The explanation was that for Indonesia not much large investors were interested in investing their funds in Indonesian listed firms due to the politic situation that will affect the economic and company performance. This research conclude that, when institutional investors have relatively low shareholdings in a company, there is less incentive for them to monitor managerial opportunism and they tend to be short-term oriented in their investment decision.

External Audit Quality and IS Practices

The primary purpose of the external audit function is to give opinion and obtain reasonable assurance that financial statements are free of material misstatement. This study aims to test if the external audit has a significant effect on the practice of IS. Therefore, as stated in hypothesis H3, it is hypothesized that there is a significant relationship between the IS practices and the quality of external audit firms. The logistic regression results in Appendices show that external audit quality has no significant relationship ($\alpha \leq 0.1$) with IS practices for two periods, during 2009 at $p = 0.107$, but it has higher significant relationship ($\alpha \leq 0.1$) at $p = 0.064$ in 2010 and have significant relationship in 2011 at $p = 0.051$ and in 2012 with $p = 0.048$. For the Indonesia case, the empirical evidence on external audit quality measures has been mixed.

Research by Fan and Wong (2005), Francis et al. (2004) state that the quality of the external auditor's performance is multi-dimensional as set forth in the auditing standards and also in the differences auditor capabilities. Therefore, audit quality differences result in variation of the credibility offered by the external auditors, and external auditors cannot obtain absolute assurance that the financial statements are free from misstatements (Krishnan 2003).

In 2011 and 2012, there is a relationship between the IS practices and the quality of external audit firms. The possible explanation is that after the long financial crisis period the economy was more stable and this created a major challenge for managers and external audit seeking to maintain investors' confidence in companies' performance. Therefore, research finding shows that high quality external audit can constrain income smoothing practices and can provide more precise financial information. It means that external audit influences in enhancing the credibility of financial reporting quality as shown by the reduction of IS practices.

Type of Industry and IS Practices

Some research concluded that companies in different industries smoothed their income in varying degrees. It appears that companies in certain industries (for example, hotel, real estate and service industries) face a higher degree of environmental uncertainty and such companies have more opportunity to smooth their income. As shown in H4, this study hypothesizes that there is a significant relationship between the IS practices and the type of industrial sector of the company. Appendices shows that in all the four periods the type of industry has no significant relationship with the behavior of IS practices $p = 0.407$ in 2009, $p = 0.201$ in 2010, $p = 0.167$ in 2011 and $p = 0.102$ in 2012. The explanation is that for Indonesian listed firm, the IS practices do not depend to the type of industry but do on firm's performance and income smoothing practices are more likely to be present when a firm's performance is usually bad or in loss condition.

5. CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATIONS

In general, it can be concluded that the highest percentage of using DAC (69%) is in 2009, and the lowest of DAC (41%) in 2012. Accordingly, it can also be asserted that Indonesian listed firms tend to use DAC as income smoothing instrument to smooth their income. In addition, external audit

quality and institutional ownership have positive significant influence towards IS practices.

The limitation in this study is that this focuses only on publicly listed companies in Indonesia, as an emerging capital market. Therefore, the findings reported in this study might not be generalizable to other firms in other countries with different economic and business settings. For future research, the research can develop and combine a better IS practice model. It can develop a particular model for local or foreign investor, probably with different institutional ownership characteristics, the influence of IS instruments to company income that might produce different result.

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APPENDICES

Independent Sample t-Test

	Levene's Test for Equality of variance		t-test for the Equality of Means				95% Confidence interval of the difference	
	F	Sig.	T	Sig. (2tailed)	Mean Diff.	Std. Error difference	Lower	Upper
Equal variances assumed								
2009								
Institutional Ownership	8.282	0.310	2.894	0.257	1.23489	0.4219851	0.37843	2.58754
External Audit Quality	5.282	0.420	2.433	0.107	1.18239	0.200131	0.30232	2.72350
Type of industry	2.428	0.534	2.454	0.407	2.00752	0.326732	0.09828	3.32923
2010								
Institutional Ownership	3.532	0.514	2.219	0.132	1.08659	0.408861	0.134843	4.098754
External Audit Quality	4.042	0.218	3.109	0.064*	1.39707	0.804781	0.108873	3.054904
Type of industry	6.354	0.385	2.033	0.201	1.46812	0.504086	0.209873	2.764005
2011								
Institutional Ownership	5.903	0.447	2.210	0.082*	1.22112	0.400242	0.220981	2.30803
External Audit Quality	4.121	0.218	3.027	0.051*	3.08041	0.782098	0.090052	1.343027
Type of industry	2.291	0.138	3.012	0.167	2.03492	0.981001	0.19234	1.04527
2012								
Institutional Ownership	3.459	0.253	2.281	0.093*	1.23489	0.4219851	0.37843	2.15754
External Audit Quality	6.083	0.356	2.092	0.048**	0.20083	0.3823401	0.90374	2.50870
Type of industry	8.082	0.134	2.398	0.102	1.02752	0.5267032	0.09828	2.90623

Notes: The table indicated significance at 0.01 (***) , 0.05(**) and 0.1(*) levels
 Source: Research data.