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Does conservatism in financial reporting affect earnings management: An evidence of Iran

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This study investigates probable effect of conservatism in financial reporting on earnings management. Based on findings of previous studies about effects of conservatism in financial reporting on earnings management all over the world which lead to contradictory results, we are studying this issue whether conservatism facilitates earnings management or limits it. Sampling population of the present study includes 92 accepted companies at Tehran stock exchange which are working in five main industries of food and drink products, chemical materials and products, other nonmetallic mineral products, basic metals, automotive and manufacturing parts in the time period of 2002 to 2010. Givoly and Hayn model was used to measure conservatism variable. Accrual based earnings management variable was measured with two models of discretionary accruals (modified Jones model) and working capital discretionary accruals and real earnings management also was measured with decrease of selling, general and administrative expenses and increase of non-operating income taken from selling long lived assets and over-production. Results indicate that, conservatism limits earnings management except earnings management based on selling, general and administrative expenses in which conservatism facilitates earnings management.

Key words: Conservatism, accrual based earnings management, working capital discretionary accrual, real earnings management.

INTRODUCTION

If financial reports are to convey managers’ private information on their firms’ performance, standards have to permit managers to exercise judgment in financial reporting. Managers can then use their knowledge about the business and its opportunities to select reporting method and estimates that match the firms’ economy, potentially increasing the value of accounting as a form of communication. However, because auditing is imperfect, management’s use of judgment also creates opportunities for “earnings management”, in which managers choose reporting methods and estimates that do not adequately reflect their firms’ underlying economy (Healy and Wahlen, 1999). In other word, management is doing something that harms someone else (Lo, 2008).

One means of managing earnings is by manipulation of accruals with no direct cash flow consequences, here after referred to as accrual manipulation. Examples include, under-provisioning for bad debt expenses and delaying asset write-offs. Managers also have incentives to manipulate real activities during the year to meet certain earnings targets. Real activities manipulation affects cash flows and in some cases, accruals.

Most of the current research on earnings management focuses on detecting abnormal accruals. Studies that directly examine earnings management through real activities have concentrated mostly on investment activities, such as reductions in expenditures on research and development (Roychowdhury, 2006).

In this situation, a basic question for standard setter (and regulators), Auditors, investors, and researchers,
therefore, is to decide how much judgment to allow management to exercise in financial reporting. To resolve this general question, standard setters are likely to be interested in evidence on how management uses or misuses judgment permitted under accounting standards. Specifically, standard setters are likely to be interested in a rich set of questioned, including which specific accruals are used to manage earnings (Healy and Wahlen, 1999).

On the other hand, recent research shows increased appreciation for the importance of understanding how firms manage earnings through real activities manipulation in addition to accrual-based activities (Gunny, 2005; Roychowdhury, 2006; Zang, 2006). For example, Roychowdhury (2006) finds evidence that firms use multiple real earnings management methods in order to meet certain financial reporting benchmarks to avoid reporting annual losses. In particular, his evidence suggests that managers are providing price discounts to temporarily boost sales, reducing discretionary expenditures in order to improve reported margins, and over producing to lower the cost of goods sold.

Extant literature (Aono and Guan, 2007; Zhou, 2007) provides evidence that the Sarbanes–Oxley Act (SOX) was successful in deterring accrual-based earnings management. However, Cohen et al. (2008) document a significant increase in real earnings management activities in the Post-SOX era concurrent with the decline in accrual based earnings management suggesting that firms may be switching from accrual-based to real earnings management methods after the passage of SOX.

Considering that the in some countries the law does not run SOX, so another solution to prevent earnings management through the various methods is necessary. Lobo and Zhou (2006) in their studies found that those companies which report conservative financial statements can have more earnings management. In contrast Zhou (2008) found that, those companies which report conservative financial statements can have little earnings management. LaFond and Watts (2008) have achieved this result that, information asymmetry between firm insiders and outside equity investors generates conservatism in financial statements. Conservatism reduces the manager’s incentives and ability to manipulate accounting numbers and so reduces information asymmetry and the deadweight losses that information asymmetry generates. This increases firm and equity values.

Studies of specific earnings management tools and the effect of earnings management on resource allocation were suggested. At that time, they urged the accounting profession to consider areas where standards could be altered to decrease the ability to manipulate earnings-places where it would make the most difference in assuring efficient resource allocation. On the other hand, all research investigated probable the effect of conservatism in financial reporting on accrual-based earnings management, but none of them has ever examined relationship between conservatism and real earnings management.

Considering the above discussion examines the relationship between earnings management and conservatism in accounting system of Iran based on type of industry.

**LITERATURE REVIEW**

Conservatism, one of the most prominent characteristics of financial accounting, has influenced accounting practices for centuries. Two important reporting features of conservative accounting are asymmetric timeliness in recognition of accounting gains versus losses and systematic understatement of net assets (Givoly et al., 2007; Roychowdhury and Watts, 2007). These two features result from accountants’ predisposition to require a higher degree of verification and certainty for the establishment of assets as compared with liabilities (Watts, 2003).

As Healy and Wahlen (1999) and similarly Schipper (1989) define: earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.

Prior researches classify earnings management into two broad categories: real earnings management (that is, affecting cash flows) and accruals management through changes in estimates and accounting policies. Although, real earnings management has not been as widely studied as accrual based earnings management, the study of Graham et al. (2005) indicates that managers prefer real activities manipulation (for example, reducing discretionary expenditures or capital investments) over accruals manipulation as away to manage reported earnings. These real earnings management activities are significantly different than accrual-based ones as they have direct effects on cash flows.

Managers may want to engage in real earnings management versus using accruals management for several reasons. First, aggressive accounting choices with respect to accruals are at higher risk; second, the firm may have limited flexibility to manage accruals. For example, accruals management is constrained by the business operations and accrual manipulation in prior years (Barton and Simko, 2002). Further, accruals management must take place at the end of the fiscal year or quarter and managers face uncertainty as to which accounting treatments the auditor will allow at that time. Operating decisions are controlled by the manager, whereas, accounting choices are subject to auditor scrutiny. On the other hand, managers may prefer...
accruals management to real earnings management because accruals management can take place after the fiscal year end when the need for earnings management is the most certain, whereas, real earnings management decisions must be made prior to fiscal year end (Gunny, 2010).

Regulators, standard setters and academics have expressed concerns that firms use the veil of conservative accounting to manage earnings (Devine, 1963; FASB, 1980; Levitt, 1998; Penman, 2001). For example, Levitt (1998) alleges that, firms purposely understate assets on the balance sheet and subsequently reverse those understatements to inflate earnings. The Financial Accounting Standards Board (FASB) indicates that conservative accounting should not be used to justify the intentional under-statement of net assets because that practice may lead to overstated earnings in future periods (FASB, 1980).

Lee (2010) finds that firms with greater reporting conservatism exhibit less financial flexibility in their corporate liquidity management, their debt or equity issuance decisions, the sensitivity of their investments to financing constraints and their payout policies. Overall, the results suggest that, while firms enjoy lower debt contracting costs and mitigate agency conflicts by reporting conservatively, they give up some financial flexibility in future access to capital which affects their financial decisions.

LaFond and Watts (2008) provide evidence that the level of information asymmetry between inside and outside investors is positively related to the degree of conservatism and that information asymmetry leads conservatism. Also they explain why conservatism responds promptly in the same year or the next year to changes in information asymmetry. Specifically, they point out that information asymmetry between inside and outside investors not only generates agency costs that reduce the future cash flows of firms, but also increases the required rate of return on the stock.

Researchers reason that accounting conservatism exists in response to economic demand for verifiable and timely information that mitigates agency problems in contracting, and in response to changes in the regulatory and litigation environments (Holthausen and Watts, 2001; Watts, 2003). Empirical studies generally find evidence in support of the contracting and governance role of conservatism in both equity (LaFond and Watts, 2008; Lafond and Roychowdhury, 2008) and debt markets (Zhang, 2008).

Existing literature reasons that accounting conservatism assists monitoring and governance by limiting managers ability to overstate financial performance opportunistically and thus, facilitates the transfer of control rights to capital providers when covenant or performance thresholds are not satisfied (LaFond and Watts, 2008; Zhang, 2008).

Wang et al. (2010) studied impact of compositions and characteristics of board of directors and earnings management on fraud and concluded that, discretionary working capital accrual has no influence on fraud and the interaction of institutional director holding and the discretionary working capital accrual has negative influence on fraud before the act of the independent directors and auditor, but the discretionary working capital accrual has negative influence on fraud afterward.

Moradi et al. (2011) in a research titled “An investigation of the relationship between audit firm size and earning management in quoted companies in Tehran stock exchange” concluded that there is no significant difference between discretionary accruals of audited companies by auditing organization and other members of society of chartered accountants in Iran.

Barton and Simko (2002) have claimed that, the balance sheet accumulates the effects of previous accounting choices; the level of net operating assets partly reflects the extent of previous earnings management. We present evidence consistent with the hypothesis that managers’ ability to optimistically bias earnings decreases with the extent to which net asset values are already overstated on the balance sheet.

According to the contradictory results of the previous researches about the effect of conservatism on earnings management in financial statement and various application of conservatism and earnings management in financial statements, that they can have effect on the quality of financial statement and capital market and user of financial statement behavior. This study tries to investigate two factors of conservatism and earnings management in Tehran stock exchange in order to provide more useful and transparent step forward about capital market and comprehensive literature review about these two factors in Iran capital market. The present study paid attention to industry factor in order to investigate the relation between earnings management and conservatism.

Research hypotheses

H1: There is significant relationship between the conservatism and earnings management based Accrual.

Sub-hypotheses:

H1.1: There is significant relationship between the conservatism and discretionary accruals earnings management (modified Jones model).

H1.2: There is significant relationship between the conservatism and working capital discretionarly accruals.

H2: There is significant relationship between the conservatism and real earnings management.

Sub-hypotheses:
H2_1: There is significant relationship between conservatism and earnings management through the selling, general and administrative expenses.

H2_2: There is significant relationship between conservatism and earnings management through long-lived assets selling.

H2_3: There is significant relationship between conservatism and earnings management through production cost.

RESEARCH METHODOLOGY

This study is an archival research. In terms of purpose, this study is applied so that its results can be useful for extensive range of users including stockholders, auditors and Tehran Stock Exchange. Companies’ information were collected through the stock exchange official website and then the data were analyzed by the econometrics software SPSS.

Sampling population of the present study includes accepted companies at Tehran stock exchange, which are working in five main industries of food and drink products, chemical materials and products, other nonmetallic mineral products, basic metals, automotive and manufacturing parts. But because of the large numbers of accepted companies in Tehran stock exchange and also the presence of heterogeneity, in order to minimize the population, some special factors have been taken into considerations which are as the followings:

1. End of March as the annual financial year.
2. Those companies which their financial information is accessible.
3. The sample companies must not be the investors companies.
5. Stock trade of the companies in Tehran stock exchange must be regularly without any pause.

Variables and measuring methods

In this paper, the following models for measuring of research variables are applied:

The measurement models of accrual based earnings management

Discretionary accruals items (modified Jones model): A generally used approach in earnings management in literature is the Jones model. Conceptually, total accruals (TACC) are decomposed into non-discretionary (NDACC) and discretionary accruals (DACC). The difference between total accruals and non-discretionary accruals is the discretionary component. In other words, discretionary accruals are the prediction error in the Jones (1991) accruals model.

Jones uses a two-step approach. First, a cross-sectional regression is performed for total accruals (TACC). Total accruals (TACC) are measured as the change in non-cash working capital plus depreciation and amortization. Jones then regresses total accruals on the change in sales and property, plant and equipment.

\[
\frac{TACC_{it}}{TA_{it-1}} = \beta_0 \left( \frac{1}{TA_{it-1}} \right) + \beta_1 \left( \Delta REV_{it} - \Delta REC_{it} \right) / TA_{it-1} + \beta_2 \left( \frac{PPE_{it}}{TA_{it-1}} \right) + \epsilon_{it} \tag{1}
\]

Where: \( TA \), is total assets; \( \Delta REV \), changes in revenue; \( \Delta REC \), changes in receivables; and \( PPE \), property, plant and equipment. \( \Delta REV \) and \( PPE \) should be controlled for the non-discretionary part of total accruals since those items are associated with changes in operating activity and level of depreciation.

The second step is to use these industry-year parameter estimates from the previous Equation 1 to divide the total accruals into a DACC and a NDACC. NDACC are the predicted part of total accruals and DACC are the residual resulting from this regression.

\[
NDACC_{it} = \beta_0 \left( \frac{1}{TA_{it-1}} \right) + \beta_1 \left( \Delta REV_{it} - \Delta REC_{it} \right) / TA_{it-1} + \beta_2 \left( \frac{PPE_{it}}{TA_{it-1}} \right)
\]

\[
DACC_{it} = TACC_{it} / TA_{it-1} - \beta_0 \left( \frac{1}{TA_{it-1}} \right) + \beta_1 \left( \Delta REV_{it} - \Delta REC_{it} \right) / TA_{it-1} + \beta_2 \left( \frac{PPE_{it}}{TA_{it-1}} \right)
\]

\( \beta_0, \beta_1 \) and \( \beta_2 \) are the industry-year parameter estimated in regression (1).

Working capital discretionary accruals: Many studies have been done about the efficiency of the modified Jones model to identify earnings management (Guay et al., 1996). Peasnell et al. (1998) indicated that, the modified Jones model control just a few of the working capital discretionary accruals. Accordingly, recent research has identified an alternative for discretionary accruals (Teoh et al., 1998a). This is called working capital discretionary accruals. Based on this method, only working capital discretionary accruals can be classified as the discretionary and nondiscretionary. The reason is that the working capital discretionary accruals with the long-term accruals give more freedom to the managers in comparison with current accruals so it can be said that the working capital discretionary accruals can be superior to the discretionary accruals

\[
WAC_{it} = b_{it} \left( \frac{1}{TA_{it-1}} \right) + b_1 \left( \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}} \right) + \epsilon_{it}
\]

Working capital discretionary accruals i company in the year of t.

Then the estimated coefficient of regression will be calculated through the subtraction of working capital discretionary accruals from the whole working capital nondiscretionary accruals as follows:
For measuring of conservatism, Givoly and Hayn (2000) model was used. Based on Givoly and Hayn (2000) model, conservatism is stated in forms of non-operating accruals (NOACC). The more the non-operating accruals, the less the conservatism. Therefore, in this study, symmetry of non-operating accruals is used as conservatism index (direct criteria).

The measurement model of real earnings management

Real earnings management also was measured with decrease of selling, general and administrative expenses and increase of non-operating income taken from selling long lived assets and over-production.

The normal level of administrative, general and selling expense is estimated using the following model (Anderson et al., 2003):

\[
OACC_{it} = \Delta(AR_{it} + I_{it} + P_{it}) - \Delta(AP_{it} + TP_{it})
\]

\[
NOACC_{it} = ACC_{it} - OACC_{it}
\]

Where: \( NI \), net income before extraordinary items; \( DEP \), depreciation expenses of firm; \( CFO \), cash flow from operating; \( AR \), accounts receivable; \( I \), inventories; \( P \), prepaid; \( AP \), accounts payable; \( TP \), is tax payable.

DISCUSSION

Here, the required data of conservatism, accruals earnings management and real earnings management is collected from the financial statement of accepted companies in Tehran stock exchange, which are involved in the main five industries of drinking and food, chemical material and product, nonmetal products, main steel and automotive and manufacturing parts. Then the descriptive statistics related to the research variables, mean and standard deviation of each variable for each year was calculated through the SPSS software, and also in this section, the related statistics to normal distribution is calculated through the K-S test.

In the next section and the hypothesis testing section, the analysis was correlated and the regression model was used in order to identify the effect of independent variable over the dependent variable and also accruals was used to identify the regression residual.

Table 1 shows that error level for all under investigation industries is more than 0.05, so it can be concluded that...
there is no significant relationship between the conservatism and accrual-based earnings management (modified Jones model). Conservatism function is a reversed function; it means that when non-operating accruals are low, the conservatism is high. When the discretionary accruals are positive, this time the managers are inclined to use it more than the other times. So the positive correlation coefficient between the accrual-based earnings management indicates that, when conservatism increases, the accrual-based earnings management decreases. This means that, managers who emphasize conservatism in preparing financial statement will have few tools and opportunities for the accrual-based earnings management. In fact, conservatism causes limitations and preventions for excessively cautious and conservative managers in manipulation of income statement.

On the other hand, Table 1 shows that the error level for other nonmetallic mineral products industries is less than 0.05, so it can be concluded that there is a significant relationship between the conservatism and working capital discretionary accruals earnings management, of course in the other industries there is a weak positive relationship. As it is mentioned above, conservatism function is a reversed function; it means that when the conservatism is high, the earnings management decreases. This means that the conservatism is an obstacle for earnings management and causes limitations for managers in manipulation profits. And quite contrary, if the managers ignore or pay less attention to conservatism in providing the financial statement, they will have more tools and opportunities for earnings management.

According to the results of Table 1 and the results of the other research, working capital discretionary accruals is more efficient in comparison with discretionary accruals (modified Jones model). As the results show, in accrual-based earnings management (modified Jones model), the relationship between the conservatism and earnings management is not verified. But working capital discretionary accruals this relationship is verified in other nonmetallic mineral products industries.

Table 2 shows that the error level for all under investigation industries is more than 0.05, so it can be concluded that there is no significant relationship between the conservatism and earnings management through selling, general and administrative expenses. It is worth to mention that the model of measuring of selling, general and administrative is the same as conservatism measuring, which means that the negative numbers show earnings management based on selling, general and administrative is weak, and the positive relation between these variables show when the conservatism is high, earnings management through selling, general and administrative expenses is high too. In the other words, managers who emphasize the conservatism, in fact provide a suitable ground for earnings management through selling, general and administrative expenses. In effect, it can be said that the conservatism facilitates the earnings management through selling, general and administrative expenses and does not limit the managers in adjusting the income statement through selling, general and administrative expenses.

Also, the findings of Table 2 show that there is a significant relation between the conservatism and earnings management through long-term assets selling in food and drinking products and other nonmetallic mineral products industries. In these hypotheses, there is positive and weak relation (except in food and drinking products and other nonmetallic mineral products industries) and
Table 2. The result of regression coefficient in investigating the relationship between conservatism and real earnings management.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Food and drink products</th>
<th>Chemical materials and products</th>
<th>Other nonmetallic mineral products</th>
<th>Basic metals</th>
<th>Automotive and manufacturing parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between conservatism and earnings management through selling, general and administrative expenses relationship</td>
<td>p-value 0.924</td>
<td>0.358</td>
<td>0.783</td>
<td>0.257</td>
<td>0.889</td>
</tr>
<tr>
<td>t-statistic</td>
<td>0.098</td>
<td>0.954</td>
<td>0.281</td>
<td>1.211</td>
<td>0.129</td>
</tr>
<tr>
<td>Coefficient of determination ($R^2$)</td>
<td>0.001</td>
<td>0.065</td>
<td>0.007</td>
<td>0.14</td>
<td>0.001</td>
</tr>
<tr>
<td>Coefficient of correlation</td>
<td>0.033</td>
<td>0.256</td>
<td>0.081</td>
<td>0.384</td>
<td>0.033</td>
</tr>
</tbody>
</table>

| Relationship between conservatism and earnings management through long-lived assets selling | p-value 0.022 | 0.637 | 0.003 | 0.183 | 0.916 |
| t-statistic | 2.75 | 0.483 | 3.711 | 1.442 | -0.107 |
| Coefficient of determination ($R^2$) | 0.457 | 0.018 | 0.534 | 0.188 | 0.001 |
| Coefficient of correlation | 0.676 | 0.133 | 0.731 | 0.433 | 0.033 |

| Relationship between conservatism and earnings management through production costs | p-value 0.011 | 0.478 | 0.109 | 0.786 | 0.708 |
| t-statistic | 3.211 | 0.731 | 1.73 | 0.28 | -0.382 |
| Coefficient of determination ($R^2$) | 0.534 | 0.039 | 0.2 | 0.009 | 0.01 |
| Coefficient of correlation | 0.731 | 0.199 | 0.447 | 0.093 | 0.098 |

Table 3. The result summary of hypotheses test.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Food and drink products</th>
<th>Chemical materials and products</th>
<th>Other nonmetallic mineral products</th>
<th>Basic metals</th>
<th>Automotive and manufacturing parts</th>
<th>Total Industry Research</th>
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</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td>-</td>
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</tr>
<tr>
<td>$H_{1-1}$</td>
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<td>-</td>
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<tr>
<td>$H_{1-2}$</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$H_{2-1}$</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>$H_{2-2}$</td>
<td>+</td>
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<td>+</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$H_{2-3}$</td>
<td>+</td>
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<td>-</td>
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</tr>
</tbody>
</table>

Sign (-): reject hypothesis; Sign (+): confirm the hypothesis.

conservatism the function is reversed. In the other words, when the conservatism increases, the earnings management by selling long-term assets decreases. In fact, there is this probability that those managers, who use less conservatism in providing the financial statements want to adjust and manage the profits of selling long-term assets.

On the other hand, as shown by Table 3 that the relationship between the conservatism and earnings management through production cost in food and drinking industries is verified. As the error level for food and drinking industries is less than 0.05, it means that there is a significant relation between these variables in the food and drinking industries. In general, the positive relation between these two shows that the conservatism limits the earnings management through the production costs.

As it was said that the conservatism increases when the non-operating accruals decreases and the earnings management through production costs increases when the production costs increases. So this positive relation shows that, with the increase of the conservatism, managers have fewer tendencies toward the earnings management through the production cost. In fact, it can be said that the increase of the conservatism limits the earnings management through the production costs.

RESULTS

This research tries to answer whether there is a relationship between the conservatism and earnings managements by using different models in different
industries of accepted companies in Tehran stock exchange.

The results of the present study show that in most of the cases, there are a weak and positive correlation between conservatism and earnings management through different methods. Conservatism limits companies’ earnings management. Except for earnings management through selling, general, administrative expenses in which the conservatism facilitates this kind of earnings management. In fact, it can be said that conservatism decreases the managers’ abilities in earnings management, which means that the more the managers pay attention to conservatism in providing financial statements, the more the managers will encounter limitations in manipulating the reported income. On the other hand, the managers who use provide their financial statements conservatively, they are seeking to adjust their income statement by selling, general, administrative expenses because as it was mentioned above, the more the conservatism increases, the more the managers can manage earnings through selling, general, administrative expenses and in this situation they can adjust their income statement.

The present study also reveals that the classification of companies into different industries can be effective in accounting research. In order to accomplish a more exact result, the companies can be divided into homogenous groups through other methods of dividing.

On the other hand, in comparison with the other statistical data of the two models, discretionary accruals (modified Jones model) and working capital discretionary accruals, shows that the modified Jones model does not verified any relation between conservatism and earnings management in any kind of industries. But working capital discretionary accruals measuring model verified the relation between conservatism and earnings management in nonmetal industries. So in overall, it can be concluded that this research verified the effectiveness of working capital discretionary accruals measuring model more than the discretionary accruals measuring model (modified Jones model) ones.

REFERENCES