Determinants of Earnings Management: Evidence from Nigerian Real Sector

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Abstract
This study examines the effective factors determining earnings management among Nigerian companies. The variables considered include: financial performance, firm size, board characteristics (board size and independence) and audit committee independence; external auditor type was used as a control variable. The study employs the panel data multiple regression designs. Data were extracted from annual financial statements of the selected firms. A sample of 72 firms was used to provide data for a period of 10 years. The results of the analysis show that all the studied variables exerted a positive effect on earnings management, but only financial performance (proxied by EPS) and firm size (proxied by the log of total assets). Board size and independence and audit committee independence and external auditor type are not significant determinants of earnings management of earnings management. The study recommends that concerted efforts must be made to prevent manipulative and misleading earnings management practices; Investors should never make profitability and size their major indicators for making investment decisions; they must always look beyond the numbers; regulators should set guidelines to moderate the accounting choices available to preparers of accounting reports so as to make such reports more reliable; accountants must balance their responsibilities to service the information needs of all stakeholders.

Key Words: Discretionary accrual: Income smoothing, Performance, Board of directors

1.0 Introduction
Modern business structures create agency relationships, and the information advantage of the agents over the principals, arising from information asymmetry. This situation enforces the practice of earnings management by managers. Earnings management reflects the idea that all measurable things can be rigorously managed (Neffati, Fred & Schalck, 2014).

Managers can use earnings management to deliver some useful and superior information which they know about firm performance to shareholders and debt holders (Razaei & Roshani 2012). This is possible because of the information, the existence of information asymmetry. the majority of stakeholders do not have equal access to relevant information. Earnings management has been labeled the most important ethical issue facing the accounting profession (Huang & Liu, 2011). In this regard, one of the problems cited in the scandal and collapse of Enron is the presence of earnings management in the books of this world energy giant. In the earnings management-fraud continuum, while fraud is the illegal end, earnings management is at the legal end.

Being so crucial issue the problem motivating this study is what motivates the size of earnings management practices? This study, therefore, seeks to examine the firm specific characteristics that impact size earnings management practices in Nigerian firms. To achieve the objectives of this study the remainder of the study is structured thus: following this introduction, Section II systematically reviews existing relevant literature on the subject-matter: conceptual review, empirical review and theoretical framework; Section III identifies the methods employed in the study, Section IV presents and discusses the data/findings of the study, and Section V provides the conclusion and recommendations of the study.

The general hypothesis for this study is that:
Earnings management does not significantly depend on firm characteristics among Nigerian firms. In specific terms, the hypotheses are:

- **H1**: Earnings management significantly depends on profitability.
- **H2**: Earnings management does significantly depend on board size.
- **H3**: Earnings management does not significantly depend on board independence.
**H4:** Earnings management is significantly influenced by firm size.

**H5:** Earnings management is not significantly affected by audit committee independence.

### 2.0 Review of Relevant Literature

#### 2.1 Conceptual Framework

Earnings, sometimes called “bottom line” or “net income” are the single most important items in the financial statements. They indicate the extent to which the company has engaged in value added activities. They justify resource allocation; they are often times used in performance evaluation of corporate managers. Increased firm’s earnings represent an increase in the firm’s value. Theoretically, the value of a firm’s stock is the present value of the future earnings. It should, however, be pointed out that earnings value are the result of accounting manipulation. That is, the reported earnings of an organization depend on the accounting choices adopted by that organization. Earnings management represents a deliberate attempt to manipulate the financial reporting process. In a very operational perspective;

*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 (Healy & Wahlen, 1999).*

Earnings management is not to be confused with illegal activities to manipulate financial statements and reports results that do not reflect economic reality. Earnings management are reasonable and legal management decision making and reporting intended to achieve stable and predictable financial results. According to Spohr (2005), the search for a proper definition of earnings management includes the question as to what activities can be regarded as earnings management. He noted that judgment in financial reporting that fits earnings management definition includes estimation of, for example, the economic life-time of long-term assets, losses from bad debts and asset impairments that are dependent on the future and choices between accounting methods.

Studies have shown that aggressive earnings management increases information asymmetry between insiders and outsiders, it has the potential to reduce shareholders wealth and demonstrates lower accounting quality (Teoh, Welch & Wong, 1998). Dechow and Dichev (2002) suggested that high earnings management signified lower quality and less persistent earnings.

Insiders are likely to engage in aggressive earnings management to divert resources to themselves. The executives are likely to manage earnings upwards when facing extremely poor pre-managed earnings and are close to periods of performance evaluation because of the benefits associated with overstating earnings. An example is performance-related bonus scheme; most often, managers’ compensation and bonus plans are tied to the earnings reported for a period. What may be expected therefore is to overstate earnings when faced with poor performance so as to be entitled to higher bonuses, and to understate them when earnings are beyond the maximum level at which no additional bonus is earned, the additional earnings are thus saved for the future when earnings are not high enough to earn sufficient bonus (Abdelghany, 2003; Bergstresser & Phillippon, 2006; Healy, 1985).

The definition of earnings management that we are using describes it as reasonable and proper practices that are part of a well managed business that delivers value to shareholders. Earnings management is primarily achieved by management actions that make is easier to achieve desired earnings level, and it is done through accounting choices from among GAAP; and operating decisions (sometimes referred to as economic earnings management).

An example of GAAP accounting choice is whether to be an early adopter of a new accounting standard or to wait some years when the accounting standard is required for all companies. An example of management operating decision (economic earnings management) is whether to acquire a new plant for use in operations or to lease the plant so as to gain tax advantages. Another is whether to implement a special discount or incentive programme to increase sales for a particular quarter when revenue targets are not being met. Spohr (2005) posited that earnings management could be detected through accounting method choice and timing.
Discretionary accruals cannot be observed directly from financial statements; they are usually estimated through some kinds of models. These models form an expectation on the non-discretionary accruals level, and the amount by which the actually observed accruals deviate from this level is assumed to be discretionary accruals (Spohr, 2005). Most of the models estimate firm’s non-discretionary accruals from the firm’s past accruals levels during periods when no systematic earnings management is assumed (Jones, 1991). The alternative is to use a cross-sectional approach where a firm’s normal level of accruals in a period is given by a comparable firm’s accruals in the same period (DeFond & Jiamhavlo, 1994). The problem with both the time series and the cross-sectional approach is that accruals vary with changes in business circumstances. The simplest of these models tested hypotheses on earnings management behaviour by arranging the observations in the sample into groups based on their hypothesized earnings management behaviour and tested by pair wise comparisons of mean total accruals (scaled by lagged total assets) between groups for which different earnings management behaviour was assumed. This process led to the following model (Healy, 1985).

\[
DAC_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}}
\]

Where:
- \(DAC_{i,t}\) = Discretionary accruals for firm i in period t.
- \(TA_{i,t}\) = Total accruals for firm i in period t
- \(A_{i,t-1}\) = Total assets for firm i in period t-

DeAngelo (1986) estimated the firm’s non-discretionary accruals from the previous period, and therefore this can be viewed as a time-series version of Healy model. The DeAngelo model is given as:

\[
DAC_{i,t} = TA_{i,t} - TA_{i,t-1}
\]

Friedan (1994) assumed non-discretionary accruals to be proportional to operating activities as measured by sales. This has come to be known as the modified DeAgelo model and has the advantage that it does not place high requirements on the availability of data. If allows non-discretionary accruals to fluctuate between periods due to changes in circumstances. The model is specified as:

\[
DAC_{i,t} = \frac{TA_{i,t} - TA_{i,t-1}}{S_{i,t} - S_{i,t-1}}
\]

The most popular of the models is perhaps the Jones (1991) model. It estimates non-discretionary accruals with an OLS regression with changes in sales and level of property, plant, and equipment as the explanatory variables with data from between 14 and 32 years per firm. The model is given as:

\[
TA_{i,t} = \beta_0 + \beta_1 \Delta REV + \beta_2 PPE + \epsilon_{i,t}
\]

Where:
- \(\Delta REV\) = Change in sales from period t-1 to product t for firm i
- \(PPE\) = Gross property, plant and equipment for firm i in year t
- \(\epsilon_{i,t}\) = Error term for firm i in year t.

Since this model was first introduced there has been several modifications to it (Spohr, 2005). Fluctuations in firm performance can be hidden by insiders’ usage of accounting discretion; insiders can hide poor current performance by reporting future revenues and delaying recognition of current costs. On the other hand, they can under-report good current performance with the intension of effectively creating reserves for the future (Dechow, 1994; Zhang & Uchida, 2011). Investors and analysts do have problems in valuing accruals correctly, but the importance of accounting earnings in firm valuation has been increasing over the years (Bernard, 1995). Much of the interest in the fundamental analysis was the result of residual income valuation model as presented by Ohlson (1995). It is known as abnormal “earnings” because “abnormal earnings” is the expected return on the book value invested at the beginning of the period. Thus, abnormal earnings can also be expressed as the earnings minus the charge for the use of capital. By this definition, the period is profitable when earnings exceed the firm’s cost of capital (Ohlson, 1995). This means that if the firm’s earnings are just equal to the required cost of capital, the
investors will not be willing to pay more than the book value for the firm’s shares. This implies that the firm’s value is the sum of book value and the present value of expected future abnormal earnings:

$$V_t = b_t + \sum_{i=r}^{\infty} E_t(X_{t+r}^a) \frac{1}{(1+r)^t}$$

This relation shows that the value of the firm is expressed in accounting numbers and it originated from the dividend discounted model, with the assumption of clean surplus.

Earnings management affects firm value in three different ways in the discounted abnormal earnings model (Spohr, 2005). First, he noted that the positive component of managed earnings directly increases book value and firm value by the same amount. Secondly, the managed earnings are likely to affect the estimated future abnormal earnings through information dynamics (Ohlson, 1995). Due to the positive serial correlation between abnormal earnings, higher earnings during this period are likely to lead to revised estimations about future abnormal earnings. Finally, earnings management may affect firm value through the cost of capital (Spohr, 2005).

By measuring a period’s performance with earnings, the matching and timing problems inherent in cash flows are decreased through the use of revenue recognition and matching principles (Dechow, 1994). The revenue recognition principle states that revenues should be recognized when the firm has delivered a product or produced a substantial portion of it, and the cash receipt is reasonably certain. The matching principle requires that revenues recognized during a period be matched with the associated costs (Weetman, 2003). Over the life time, a firm’s cash flows and earnings are the same, but when accounting principles are applied over finite time periods, cash flows have to be adjusted to produce earnings numbers. These adjustments are made with accruals on the statement of financial position, and hence, earnings are the sum of a periods change in accruals and cash flows (Spohr, 2005).

Managers use their opportunistic knowledge of the firms’ business circumstances to make adjustments to accruals. Although this necessary use of managerial discretion in accruals estimation is opened to opportunism and errors, there is a vast body or research showing that earnings are a useful performance measure. Such research shows that share prices react to changes in earnings than to changes in cash flows is a natural conclusion (Spohr, 2005). This conclusion is supported by other research findings (Dechow, 1994; Dechow, Kothari & Watts, 1998).

Although earnings are a useful accounting measure of performance the accruals component has continued to generate valuation problems, investors fail to correctly value total accruals because they over-estimate their persistence (Sloan, 1996). Dechow and Dichev (2002) suggested that the valuation problems in accruals are not due to the intentional use of managerial discretion. They demonstrated that firms with high variability in cash flows have higher accruals estimation errors and thus lower difficulty in estimating accruals correctly than intentional accruals management. Another view that has nothing to do with opportunism or errors in estimation is that accruals and growth are associated, that it is growth, not accruals which are not valued by investors (Chan, Chan, Jegadeese & Lakonishok, 2001; Fairfield, Whisenant & Yohn, 2003).

The problem with many accounting choices is that there are no clear posted limits beyond which a choice is obviously illegal. Thus, a perfectly routine accounting decision such as expense estimation may be illegal if the amount is extreme but perfectly legal if it is reasonable. GAAP does not tell managers what specifically is normal and what is extreme. It is more like a speed limit sign that simply says “Don’t Drive Too Fast.” At what point does “fast” become “too fast,” it is subjective and subject to abuse.

Accounting method choice is interpreted to include both the choice of a particular accounting method such as the choice of capitalizing an intangible asset or expensing it and the choice of how to apply the method. The choice of the application of the method in the case of an intangible asset refers to the determination of an appropriate depreciation procedure. The manager has discretion as to the timing when an event is shown in accounting, for instance, when the bad debt or impaired assets are written off. Another dimension of this is the timing of the transaction that affects the reported earnings, for instance, the R&D projects or advertisement campaigns may be timed so that the expenses affect the earnings of the subsequent period. A third dimension is
the appropriate timing of asset disposals and the consequent realization of gains and losses in the income statements. The areas where such accounting choices have been studied include inventory valuation, depreciation method choices, and capitalization vs. expense decision concerning intangible assets and interest (Fields, Lys & Vincent, 2001; Watts & Zimmerman, 1986). Other areas are the choice of capitalized R&D or expense them (Aboody & Lev. 1998). Spohr (2005) noted that an arguably more expensive form of timing propensity is the adjustment of investment decisions to achieve a short-term earnings goal. Dechow and Sloan (1991) showed that CEOs spend less on R&D in their last years in office so as to improve short-term earnings performance. Other motives why R&D expenditures are altered are to reach positive and increasing earnings, avoid earnings decreases and smooth earnings (Bushee, 1998; Mande & File, 2000).

2.2 Review of Empirical Literature
In general, Sun and Rath (2010) observed that managers had been found to engage in earnings management through changing accounting choices, real transactions, total accruals/discretionary accruals, specific accruals, earnings distribution approach and income smoothing. They further noted that the most researched of these approaches is the total accrual approach. This, as observed by Al-Fayoumi, Abuzayed and Alexander (2010) is the most damaging to the relevance of accounting information. Total accruals are the difference between net income and cash flow from operating activities. It is further divided into two: discretionary and non-discretionary accruals. Discretionary accruals are these adjustments to the cash flows that largely depend on manger’s judgment of future uncertain events while non-discretionary accruals are those adjustments to the firm’s flows that reflect the underlying economic conditions of the firm and are required by the accounting standards-setting bodies (Hassan & Ahmed, 2012b; Osisioma & Enahoro, 2006).

One can expect that there is a negative relation between the change in accounting accruals and the change in cash flow if insiders adopt accruals to boost the fluctuation in firm performance (cash flow volatility) (Dechow, 1994; Zhang & Uchida, 2011).

Fields et al. (2001) examined studies from the 1990s and concluded that research in the 1990s made limited progress in expanding the understanding of accounting choice because of limitation in research design and a focus on replication rather than an extension of current knowledge. Rezaei and Roshani (2012) Iranian firms from 2004 to 2009, using a sample of 167 firms listed on the Stock Exchange, and found that managers tend to use efficient earnings management according to firm size, ownership structure, audit quality and the proportion of independent board members. Neffati et al. (2011) studied U.S companies and concluded that earnings management is positively correlated with all forms of risk, deducting that meaning good corporate governance teds to decrease risk. Studying non-profit hospitals in Taiwan, Haung and Liu (2011) found that C.E.O duality negatively relates to earnings management. Amer and Abdelkarim (2011) used a sample of 22 listed Palestinian firms and used data for 2009 and 2010 and found that inconclusive results exist between the studied explanatory variables (board independence, board size, ownership concentration, CEO duality and audit quality) and earnings management between 2009 and 2010.

2.3 Theoretical Review
The followings are the relevant theories of this study: Agency theory and Stakeholders theory.

(a) Agency Theory
The theoretical framework upon which this study is based is the agency theory. This theory posits that there is information asymmetry between the principal and the agents; the agents; (the managers and directors) are likely to pursue interests that may be at variance with those of the principal, that is, the shareholders (Namazi, 2013). The agency theory seeks to explain the relationship between managers and shareholders as a result of the separation of ownership from control of the modern day business. Theoretically, the manager is expected to act in a manner that tally’s with the interests of shareholders. This may not, however, be the case as the manager enjoys the more privileged information that makes it possible to pursue self-interest at the expense of that of shareholders. This may eventually affect the value maximization objective of the firm (Hassan & Ahmed,
This leads to the need to monitor managers since the owners have much to lose should things go bad as a result of managers’ opportunism (Usman & Yero, 2012).

Isenmila and Elijah (2012) note that agency problems occur when the interests of agents do not align with those of principals owing to the separation of management and ownership. In practice, the interests of those who have effective control over a firm can differ from the interests of those who supply the firm with external finance. The principal-agent problem is reflected in management pursuing activities which may be detrimental to the interests of the shareholders of the firm.

(b) Stakeholders’ Theory
Sanda, Mikailu, and Garba (2005) note that at first, the agency theory was applied to the relationship between managers and equity holders with no explicit recognition of the interests of other parties. Subsequent researches have widened the scope to include other stakeholders such as employees, creditors, and government. This approach attempts to align the interests of managers and all stakeholders and has come to be regarded as the stakeholders’ theory. The study therefore also draws from the stakeholders’ theory. Scholars note the presence of many parties interested in the well-being of the firms and that those parties often have to compete for interests (Sanda, Mikailu & Garba, 2005). For example, while equity holders might welcome investments in high yielding but risky projects, such investments might jeopardize the interest of debt holders. This effectively means that managers will have multiple objective functions to optimize, which Jensen (2001) sees as a weakness of the stakeholder’s theory and thus proposed that there should be a refinement to the stakeholders’ theory to become the enlightened stakeholders’ theory. Another appeal of this modified version is that it provides a simple criterion for managers to decide whether the interests of all stakeholders are being protected: invest a dollar of the firm’s resources as long as that will increase by, at least one dollar, the long-run value of the firm (Sanda, Mikailu & Garba, 2005). This criterion may be weakened by the presence of a monopoly situation or externalities (Jensen, 2001). The board may provide the monitoring of management that can lead to transparent and reliable reporting (Rauf, Johari, Buniamin & Rahman, 2011). In other words, by corporate governance, firms can ensure alignment of the interests of the principals and the agents. This study is anchored on the stakeholder's theory.

3.0 Method and Data
The data used in this study are obtained from audited annual financial statements of selected firms quoted on the Nigerian Stock Exchange (NSE). A sample of 72 subjects was used in this study. This sample is purposively selected to represent the different sectors of the Nigerian economy; this was done to ensure representativeness of the studied firms; the study covers the period 2005 to 2014. The E-Views statistical package is used to estimate the parameters of the model adopted for this study. The ordinary least squares (OLS) Panel regression method was used; this was to enable the causality of the variables to be explored. The causal model used to explain the dependent variable from the explanatory variables of this study is given below as:

$$\text{DISACR} = \beta_0 + \beta_1 \text{EPS} + \beta_2 \text{BDSZ} + \beta_3 \text{BIND} + \beta_4 \text{ADCID} + \beta_5 \text{ADTP} + \beta_7 \text{FMSZ} + \epsilon$$

The variables are defined and operationalized as given in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Symbol</th>
<th>Expected Sign</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Management</td>
<td>DISACR</td>
<td></td>
<td>Net income less net cash flow from operating activities divided by total assets.</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>EPS</td>
<td>+</td>
<td>Earnings per share</td>
</tr>
<tr>
<td>Board Independence</td>
<td>BDIN</td>
<td>+</td>
<td>Proportion of outside directors</td>
</tr>
<tr>
<td>Board Size</td>
<td>BDSZ</td>
<td>+</td>
<td>A number of directors on the board</td>
</tr>
<tr>
<td>Audit independence committee</td>
<td>ADCID</td>
<td>+</td>
<td>Proportion of Non-executive members of audit committee</td>
</tr>
<tr>
<td>Firm size</td>
<td>FMSZ</td>
<td>+</td>
<td>Log (Total Assets)</td>
</tr>
<tr>
<td>External auditor type (control variable)</td>
<td>ADTYP</td>
<td>+</td>
<td>Whether external auditor is big-4 or not (a dummy variable: 1 for big-4, 0 otherwise)</td>
</tr>
</tbody>
</table>

Source: Researchers’ Conceptualization

http://www.ijmsbr.com
4.0 Analysis of Data

Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>EPS</th>
<th>DISACCR</th>
<th>BDSZ</th>
<th>ADCOID</th>
<th>BIND</th>
<th>ADTYP</th>
<th>FMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>138.8243</td>
<td>0.097901</td>
<td>8.729529</td>
<td>0.551563</td>
<td>0.704963</td>
<td>0.627792</td>
<td>6.713245</td>
</tr>
<tr>
<td>Median</td>
<td>27.0000</td>
<td>-0.057600</td>
<td>9.000000</td>
<td>0.430000</td>
<td>0.750000</td>
<td>1.000000</td>
<td>6.762538</td>
</tr>
<tr>
<td>Maximum</td>
<td>3532.00</td>
<td>45.5743</td>
<td>16.00000</td>
<td>3.000000</td>
<td>1.000000</td>
<td>1.000000</td>
<td>8.993313</td>
</tr>
<tr>
<td>Minimum</td>
<td>-5213.00</td>
<td>-43.06230</td>
<td>3.000000</td>
<td>0.100000</td>
<td>0.090000</td>
<td>0.000000</td>
<td>3.346549</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>537.4613</td>
<td>3.803203</td>
<td>2.429871</td>
<td>0.442024</td>
<td>0.179427</td>
<td>0.483994</td>
<td>0.913319</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.48607</td>
<td>3.313711</td>
<td>0.313685</td>
<td>3.599324</td>
<td>-0.873934</td>
<td>-0.528727</td>
<td>-0.393198</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>37.55476</td>
<td>115.9344</td>
<td>2.577977</td>
<td>18.08159</td>
<td>3.318183</td>
<td>1.279552</td>
<td>3.355361</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>20065.65</td>
<td>214901.3</td>
<td>9.599725</td>
<td>4689.488</td>
<td>52.99920</td>
<td>68.47892</td>
<td>12.50477</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.008231</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.001926</td>
</tr>
<tr>
<td>Sum</td>
<td>55946.20</td>
<td>39.4543</td>
<td>3518.000</td>
<td>222.2800</td>
<td>284.1000</td>
<td>253.0000</td>
<td>2705.438</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>1.16E+08</td>
<td>5814.671</td>
<td>2373.519</td>
<td>78.54472</td>
<td>12.94207</td>
<td>94.16873</td>
<td>335.3287</td>
</tr>
<tr>
<td>Observations</td>
<td>403</td>
<td>403</td>
<td>403</td>
<td>403</td>
<td>403</td>
<td>403</td>
<td>403</td>
</tr>
</tbody>
</table>

Source: Computed from Figures Extracted from Various Annual Reports Using E-Views

Table 2 shows that the data on all the studied variables are normally distributed at 5% level of significance, as shown by the p-values of the Jarque-Bera (JB) statistic. Also, the wide range of the values of the variables shows that the firms are not dominated by any particular type of firms. The mean value of EPS is over 138 kobo with a standard deviation of 537.46. Similarly, discretionary accruals range from -43.06 to 45.57 with a standard deviation of 3.803. The results show that firm size has a mean value of about 6.7132 and a standard of about 0.9133. The table also shows a significant presence of large boards in Nigeria. The boards comprise of directors of up to a maximum of 16 members, with a mean value of over 8 and a standard deviation of 0.31369. Thus, the firms are not dominated by large or small firms audited by only big-4 or non-big 4 firms, maximum of the measure of auditor type is 1 while the minimum is 0 with a standard deviation of 0.6278. However, the table clearly shows that the firms are mostly audited by the big-4 audit firms (above 62%).

Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>EPS</th>
<th>DISACCR</th>
<th>BDSZ</th>
<th>ADCOID</th>
<th>BIND</th>
<th>ADTYP</th>
<th>FRMSZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISACCR</td>
<td>0.001653</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDSZ</td>
<td>0.174185</td>
<td>0.093947</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADCOID</td>
<td>0.038393</td>
<td>-0.010964</td>
<td>-0.277275</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIND</td>
<td>-0.036380</td>
<td>0.013792</td>
<td>-0.027610</td>
<td>-0.681939</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADTYP</td>
<td>-0.061973</td>
<td>-0.017255</td>
<td>0.144741</td>
<td>0.137025</td>
<td>-0.147394</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>FRMSZ</td>
<td>0.135680</td>
<td>-0.148780</td>
<td>0.452111</td>
<td>-0.031800</td>
<td>-0.108222</td>
<td>0.376665</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: Computed from Figures Extracted from Various Annual Reports Using E-Views

Table 3 shows that there is the absence of the problem of mult-collinearity in our model-his is because no two explanatory variables are perfectly or very nearly perfectly correlated. This suggests that there are no outliers capable of distorting the results of our analysis. The results in Table 3 also show that all the explanatory variables are mostly positively associated with the dependent variable. However firm earnings management is shown to be negatively associated with board independence and auditor type.
Table 4: Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Apriori Sign</th>
<th>Fixed Effects</th>
<th>Random Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td></td>
<td>42.6226</td>
<td>6.3054</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.751)</td>
<td>(2.823)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.000]</td>
<td>[0.005]</td>
</tr>
<tr>
<td>EPS</td>
<td>+</td>
<td>-0.0003</td>
<td>8.43E-05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.658)</td>
<td>(0.246)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.511]</td>
<td>[0.805]</td>
</tr>
<tr>
<td>BDSZ</td>
<td>+</td>
<td>0.170</td>
<td>0.3869</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.158)</td>
<td>(4.1308)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.247]</td>
<td>[0.0000]*</td>
</tr>
<tr>
<td>ADCOID</td>
<td>+</td>
<td>-0.0199</td>
<td>0.5860</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.0202)</td>
<td>(0.923)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.983]</td>
<td>[0.3564]</td>
</tr>
<tr>
<td>BIND</td>
<td>+</td>
<td>1.301</td>
<td>0.8166</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.543</td>
<td>(-1.0667)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.586]</td>
<td>[0.5485]</td>
</tr>
<tr>
<td>ADTYP</td>
<td>+</td>
<td>-0.196</td>
<td>0.5199</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.208)</td>
<td>(1.1830)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.835]</td>
<td>[0.237]</td>
</tr>
<tr>
<td>FRMSZ</td>
<td>-</td>
<td>-6.672</td>
<td>1.617</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-13.23)</td>
<td>(-6.380)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.000]**</td>
<td>[0.000]**</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td>0.4982</td>
<td>0.0828</td>
</tr>
<tr>
<td>Adj R-Squared</td>
<td></td>
<td>0.3709</td>
<td>0.0695</td>
</tr>
<tr>
<td>F-Statistic</td>
<td></td>
<td>3.914(0.00)</td>
<td>6.231(0.00)</td>
</tr>
<tr>
<td>Hausman Test (Chi-Sq)</td>
<td></td>
<td>-</td>
<td>98.56(0.00)</td>
</tr>
<tr>
<td>N(n) Balanced Observations</td>
<td></td>
<td>210 (35)</td>
<td>210 (35)</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td></td>
<td>2.322</td>
<td>1.68</td>
</tr>
</tbody>
</table>

Source: Computed from Figures Extracted from Various Annual Reports Using E-Views

Table 4 shows the various regression coefficients under both the fixed effects and random effects model. Using the Hausman test, the Hausman Statistic is 98.56 with a probability of 0.00 which means that the random effects model should be adopted. This implies that there is no correlation between the error term and the explanatory variables. This leads to the acceptance of the null hypothesis at 5% level of significance. Thus the results of the random effects panel regression results are used in drawing conclusions and recommendation for the study. This means that the R-squared and adjusted R-squared statistics are 0.0826 and 0.0695, these indicate that the combined effects of all the explanatory variables in our model (board independence, board size, firm size, audit committee independence, profitability and external auditor type) are only capable of explaining 8.26% of the systematic variations in our dependent variable (earnings management – DISACCR) and when adjusted for degree of freedom only 6.95% of the systematic variation of the use of DISACCR can be explained by the explanatory variables.

The table also shows a Durbin-Watson (DW) statistic of 1.68 which implies that there are no problems of autocorrelation in our model. The low values of R-squared and adjusted R-square imply that there are very many other variables outside our model that drive DISACCR.

4.1: Discussion of Results

The firm specific variables’ results lead to the following relationships:

**Financial Performance (EPS):** with a coefficient of 8.43E-06 and a probability of 0.805, EPS is found to positively affect DISACCR, though the effect is not significant at a 5% level of significant. This conforms to our apriori expectation that earnings management is positively associated with financial performance though the
relationship is not significant. This leads to the rejection of H1 at a 5% level of significance. The result conforms to the finding of Spohr (2005).

**Board Size (BDSZ):** with a coefficient of 0.3869 and a probability of 0.0000. BDSZ is found to affect EPS positively. The effect is significant at 5% of significance. This conforms to our apriori expectation that board size is positively related to financial performance. This leads to the acceptance of H2 at a 5% level of significance and is consistent with the finding of Amer and Abdelkarim (2011).

**Board Independence (BDIN):** with a coefficient of 0.8166 and probability of 0.5485. BDIN is found to be positively related to EPS, but the influence is not significant. This conforms to our apriori exception that board independence is positively related financial performance though this relationship is not significant; this leads to the acceptance of H3 at 5% level of significance. This result is consistent with the finding of Amer and Abdelkarim (2011).

**Firm Size (FRMSZ)** with a coefficient of 1.617 and a probability of 0.000, FRMSZ is found to have a positive and significant effect on DISACCR at a 5% level of significance. This conforms to our apriori expectation that firm size is positively related to earnings management. This leads to the acceptance of H4. This result contradicts the finding by Rezaei and Roshani (2012).

**Audit Committee Independence (ADCID):** with a coefficient of 0.5860 and a probability of 0.3564, ADCID is found to have a positive but insignificant effect on EPS at a 5% level of significance. This conforms to our apriori expectation that audit committee independence is positively related to financial performance. This leads to the acceptance of H5. The result is consistent with the finding of Haung and Liu (2011).

The **External Auditor Type (AUDTP)** is also found to positively affect EPS, though the effect is not statistically significant at a 5% level of significance.

5.0 Conclusion and Recommendations

From the findings above it can be concluded that generally financial performance and firm size have significant positive effects on earnings management. The probable explanation for this is that both financial performance and firm size are strong motivations for firms to want to present earnings in some desirable lights for corporate entities. The influence of board characteristics, audit committee characteristics and external auditor features are not significant factors in earnings management.

The major limitation of this study is that the results may have been influenced by income smoothening. The following recommendations are therefore made to ensure corporate reporting transparency and faithful financial representativeness of corporate reports.

a) Concerted efforts must be made to prevent manipulative and misleading earnings management practices.

b) Investors should never make profitability and size their major indicators for making investment decisions; they must always look beyond the numbers.

c) Regulators should set guidelines to moderate the accounting choices available to preparers of accounting reports so as to make such reports more reliable.

d) Accountants must balance their responsibilities to service the information needs of all stakeholders

References


