



AUDIT FIRM SIZE AND THE LEVEL OF EARNINGS MANAGEMENT IN THE INDUSTRIAL GOODS SECTOR IN NIGERIA.

Jack, Mpakaboari Mathew
Micah Leyira Christain

Department of Accounting,
Faculty of Management Sciences,
University of Port Harcourt, Choba, Rivers State, Nigeria.
Email: mpakajack@hotmail.com
leyira.micah@uniport.edu.ng

Article history:	Abstract:
Received: September 7 th 2021 Accepted: October 3 rd 2021 Published: November 25 th 2021	The study examined whether there is a significant relationship between audit firm size and the level of earnings management in the industrial goods sector in Nigeria. In this study, audit firm size is the dimension of the independent variable. The level of earnings management is measured by using a discretionary accruals estimation method: the Modified Jones model and Asset turnover margin diagnostics. The effect of audit firm size on earnings management is expected to be negative, as a qualitatively good audit is expected to constrain earnings management. This effect was examined by employing a multiple regression model using a sample of 14 firms in the industrial goods sector listed on Nigeria stock exchange (NSE) from 2009 - 2019. The results suggest that industrial goods sector in Nigeria context shows that the level of earnings management is not directly affected by audit firm size. This could imply that audit firms should improve their performance and that regulatory agencies should improve their supervision in order to enhance audit quality and restrain earnings management. Although prior (international) research predominantly does show significance, the absence of significance in this study could be explained by the relatively small sample size or the context in which the study takes place. It is recommended giant audit firms should intensify effort in supervising the preparation of accounting statements in the firms to enforce obedience to standards (IFRS and various ISAs)

Keywords: Audit, (NSE), Industrial Goods Sector

INTRODUCTION

There are many different motivations for applying earnings manipulation practices including reinforcing bonus plans, satisfying debt covenants, reducing political costs, and meeting investor expectations and financial analyst forecasts (Fields et al., 2001). Managers use their discretion to improve the ability of earnings to better reflect their company fundamental values (Subramanyan, 1996). This discretion of managers is enhanced by the flexibility provided by accounting standards, which enables managers to manage earnings opportunistically for their own benefit and sometimes at the expense of stakeholders (Jiraporn et al., 2008).

Managers have a variety of choices to increase or decrease earnings which is known as earnings manipulations. In the 1970s and early 1980s, a large number of studies found that managers can exercise discretion through the choice of accounting methods or

policies. For example, managers can use specific accounting policies for inventory valuation, depreciation method or the treatment of bad-debt provision; all leading to manipulation of earnings. Since the mid-1980s, studies of earnings management have focused primarily on the accruals estimation. Researchers have tried to detect earnings management by breaking the accruals into two components: discretionary and non-discretionary accruals. Managers can use discretionary accruals, shifting revenue between periods or deferring recognition of expenditures (Healy 1985; Jones 1991; Dechow, Hutton, Kim, & Sloan, 2012). Researchers have also detected earnings management through real transactions (Schipper, 1989), income-smoothing (Imhoff, 1977) and benchmark beating (Burgstahler and Dichev, 1997). All these approaches have strengths and weaknesses in detecting earnings management.

Earnings manipulation is accomplished by changing the company's underlying economy



performance which is likely to impact shareholders' wealth (Hassan & Ahmed, 2012; Gunny 2005). Earnings manipulation may negatively impact firm's future performance as the manager is willing to sacrifice upcoming cash flows to increase current period income (Chih et al., 2008). Involved earnings manipulation, whether legitimate or illegitimate, may moderate confidence and assurance in the financial information system. As a consequence, high audit quality is desired by most of the corporations to reduce the possibility of audit failure by the auditor which provide independent judgment and valuation of financial reports. The high audit quality is expected to be derived from the Big 4 auditors because large auditors have more inducements to identify any possibility of audit failure and positively contribute to credibility offered by auditor because they want to maintain their honourable reputation, thus guarantees high quality of audit (Lee & Lee, 2013; Zakaria & Daud, 2013).

Moreover, the high audit quality is expected to provide independent auditing function which possibly detect or unveil earnings manipulation and other misconducts committed by managers or the controlling shareholders (Lin & Liu, 2010). Therefore, the management is likely to influence auditor's decision and have an incentive to switch auditor with the intention to pursue their own interest.

Previous literature, suggesting audit quality constrains the earnings management, were performed mostly in the USA; where effective audit and oversight mechanism for auditors were exist (Becker et al., 1998; Francis ve Krishnan, 1999). However, when there is little risk of litigation, deterrent function of sanctions against auditors is low and no other effective disciplinary mechanism to control opportunistic behavior of auditors, auditors may choose not to provide high quality audits. In other words, if the institutional setting does not induce auditors for high quality audits, auditors may not constrain the earnings management practices of client firms (Nichols and Smith, 1983; Kim et al., 2003; Jeong and Rho, 2004; Tsipouridou and Spathis, 2012). In this context, audit environment in Nigeria where there has been a little risk of litigation for auditors, the current penalty mechanism against auditors has not been fully impemented in practice and not sufficiently deterrent, contrary to the DeAngelo's (1981) theory, Big four auditors may not constrain earnings management of client firms. Therefore, there may be no difference in audit quality between Big four and non-Big four auditors.

In Nigeria, the Cadbury (Nig) PLC scandal has remained a reference point for fraudulent financial reporting. Other incidences of fraudulent financial reporting in Nigeria include the fraud at AfribankPlc and Lever brothers(Nig) Plc(Ajayi 2006). Fraudulent financial reporting has dire consequences for the

economy of any Nation and the victim organisations. Its effects include financial loss and dent on the reputation of the victim organization(Burnaby et al. 2011). The financial effect of fraud run into billions of dollars annually (Bourke 2006). In the wake of the high profile fraud at WorldCom and ENRON average loss per case increased to \$400million(Beasley et al. 2010).The ENRON scandal also led to the disintegration of Arthur Anderson- an International Accounting firm. In Nigeria, the growing incidence of corporate fraud has meant that investors' confidence in the capital market has waned. In fact the current down turn in the market has been blamed partly on the fraud at the Nigerian Stock Exchange(Osaze 2011). Investors in Cadbury (Nig)plc also lost heavily as the share price of the company took a downward turn. The issue is whether these corporate collapses are not the outcome of poor audit quality and the inability of the audit function to arrest earnings management.

In addition, very few studies address the influence of Audit firm size which may require different measurement model of detecting earnings management in the industrial goods sector in Nigeria.

OBJECTIVES OF THE STUDY

The aim of this study is to examine the relationship between Audit firm size and earnings manipulation of quoted industrial goods companies in Nigeria. The specific objectives are;

- (i) Determine whether companies audited by big audit firm are likely to report lower discretionary accrual of quoted firms in the industrial goods manufacturing sector in Nigeria
- (ii) Examine the relationship between big audit firm and asset turnover/profit margin diagnostics of quoted industrial goods sector firms in Nigeria.
- (iii) Determine whether companies audited by small audit firms are likely to report lower discretionary accrual of quoted firms in the industrial goods sector in Nigeria
- (iv) Examine the relationship between small audit firm and asset turnover/profit margin diagnostics of quoted industrial goods sector firms in Nigeria.

RESEARCH HYPOTHESES

The following hypotheses are hereby stated:

HO1: There is no significant relationship between the Big 4 Audit firm and discretionary accruals of quoted industrial goods firms in Nigeria.

HO2: There is no significant relationship between the Big 4 Audit firm and asset turnover/profit margin diagnostics of quoted industrial goods sector firms in Nigeria.



HO3: There is no significant relationship between the small audit firm and discretionary accruals of quoted industrial goods sector firms in Nigeria.

HO4: There is no significant relationship between the small audit firm and asset turnover/profit margin diagnostics of quoted industrial goods manufacturing sector firms in Nigeria.

LITERATURE REVIEW

Theoretical Framework

Agency theory

From its roots in economics, agency theory has been used by scholars across several different disciplines, including organizational behaviour (Eisenhardt, 1985), law (Lan & Heracleous, 2010), marketing (Bergen, Dutta, & Walker, 1992), healthcare (Jiang, Lockee, Fraiser, 2012), accounting (Reichelstein, 1992), and family business (Tsai, Hung, Kuo, & Kuo, 2006). The lens offered by agency theory typically hinges around either the principal-agent problem (principal-agent research) or governance mechanisms (positivist research). In essence, sharing is of concern because the principal has bestowed certain responsibilities unto the agent to achieve like-minded goals. This cooperative behaviour (Barnard, 1938) is expected to yield the outcomes specified by the principal. However, at the very heart of the agency problem lies the concern of self-interest behaviour that may encourage an overzealous agent to not act in the best interest of the principal (Burnham, 1941). In the eyes of the principal, this divergence poses a problem and changes the agency costs (Fama, 1980). When the principal-agent relationship is initiated, the agency costs are clear to the principal. However, when the agent takes action counter to the agreement, the principal perceives that he or she has assumed more risks. And hence, the first agency problem (viz., shifts in risk sharing) emerges. The second agency problem directly stems from the first. Agency theory denotes that when agents have equity in the firm, they are more likely to embrace the actions desired by principals as those of their own (Fama & Jensen, 1983). Eisenhardt (1989) went further to theorize that when those actions are outcome-based, the agent is more likely to behave in the interest of the principal.

However, if a perceived inequity exists, agents are likely to engage in self-interested behaviour. When the agent engages in self-interested behaviour, information asymmetries are created where the principal is unable to properly monitor agent behaviour. The measurability of outcomes (Anderson, 1985) thereby becomes elusive, leading to another problem – monitoring agent behaviour. Given the nature of the two agency problems, governance mechanisms are needed to help align risk and monitor agent behaviour, which leads us back to the positivist perspective of

agency theory. In summary, two perspectives in agency theory have emerged: principal-agent research and positivist agency theory. Principal-agent research identifies two possible agency problems: risk-sharing and agent monitoring. The two problems are linked in that a divergence in the area of risk-sharing creates information asymmetries, which in turn reduces the principal's ability to monitor agent behaviour.

The shift in risk-sharing, whether perceived or actual, makes it inherently difficult to create an ideal contract between the principal and the agent. Positivist agency theory focuses on those critical governance mechanisms that limit agent's self-serving behaviour (Eisenhardt, 1989). Such mechanisms are believed to provide the desired alignment of goals and objectives for principals and agents, yet Dalton and colleagues (2007) question whether or not these mechanisms are effective. To explore this quandary, we offer an historical analysis of the key underpinnings leading up to agency theory's development. Although recent scholarship has directed our attention toward this issue (Bendickson et al., 2016), four crucial and yet to be examined historical influences can be identified: the underpinnings of Max Weber and Herbert Simon, the Great Depression of the 1930s and Berle's reflections on some of its managerial causes, cooperation via Barnard and Follett, and lastly, the Chicago School and the resurgence of neo-classical economic theory.

Weber and Simon. One of the most significant contributions to the development of agency theory emerged from the work of Max Weber, the great German sociologist. Weber's (1947) work on bureaucracy, in particular, represents an important attempt to contend with the agency problem. In his work, Weber describes an ideal type of bureaucracy where individuals are rational, and rules and preferences are clearly understood and respected. Although Weber discusses several types of authority, we focus on his discussions of formal authority, given that formal authority is the basis of contracts (especially legal contracts) in agency theory. For Weber, the basis of bureaucracy is that one party can make a legal claim to perform certain activities. These claims are defined rationally and (or) expediently.

The ability of one party to enter into the relationship is of their own choice as well as the fact that their continual membership in the organization is based on following the rules that have been set. Yet, the willingness of the follower to adhere to rules is based on the leader's position; in essence, the follower respects the position, not the leader. In Weber's ideal of the bureaucracy the agency problem, if it does not entirely disappear, is no longer a pressing issue. A leader's capacity to enforce expectations comes from law. A leader can also make use of technical rules, or use of other jurisdictions, to ensure enforcement of



what the principal may demand from the agent. In addition, the contract to work in this case is clear and preferences are well defined. Yet at the same time, the agent is able to leverage their skills to carry on work that the principal is unwilling or unable to do. However, the ability of the agent to exercise their own interests is limited since contractual obligations and enforcement mechanisms are clear.

It is clear that in the real world, bureaucracy does not work in this fashion. One of the earliest critics of bureaucracy came from the eminent sociologist Robert Merton. Merton (1940) argued that bureaucracy was problematic because it separated individuals from their personality. A more prominent challenge came from the future Nobel Laureate in economics, Herbert Simon. Simon was a political scientist, sociologist, psychologist, and computer scientist. Simon's (1965) work on organizations provided a seminal contribution to the field of management in providing an intellectual rationale as to why management mattered. Modern economics assumes that all prices are known; individuals are rational and have all knowledge. Simon (1965) posits that individuals are boundedly rational (i.e., their rationality is limited given information asymmetry, cognitive ability, time, etc.), yet prior scholars failed to note or fully explore the difficulty bounded rationality poses for organizations. Seen from this perspective, managerial orders may not be understood since individuals are boundedly rational. Hence, agency problems may emerge not from the underhandedness of the agent (or principal), but as a natural result of poor communications. Managerial incentive systems will also be of limited benefit, since principals may struggle to understand the proper incentives needed to ensure adequate contributions. Since people satisfice (i.e., settle for a satisfactory solution in the absence of an optimal one; Simon, 1965), they may not spend adequate time and energy to find out what incentives agents may wish. Given bounded rationality, then, both enforcement mechanisms and which contributions are needed remain vague.

Estimation Methods of Discretionary Accruals

Studies suggest various methods of estimating earnings management using discretionary accruals (Chang & Sun, 2010; Cohen, Dey, & Lys, 2008; Fodio et al., 2013; Peasnell, Pope, & Young, 2005). First model that tries to bring out the value of discretionary accrual is Healy (1985) in which other models build on Healy (1985) and most of them use working capital as the source for detecting accruals (Dechow, 2012). The details of some of the popular models are as follows:

Total and Current Accruals Before estimation of discretionary accruals, total accruals must be

calculated. Previous studies provided two methods of estimating total accruals: (1). Traditional balance sheet method is widely used before the use of cash flow method, which had been the commonly used method at the time (Dechow et al., 1995; Healy, 1985; Jones, 1991; Peasnell, Pope, & Young, 2000). Estimating total accruals is as follows using balance sheet approach:

$$TACT = \Delta Cat - \Delta CASHt - \Delta CLt + \Delta DCLt - DEPt$$

Whereas: ΔCat = current asset changes in year t.
 $\Delta CASHt$ = cash and cash equivalents changes in year t.

ΔCLt = current liabilities changes in year t.

$\Delta DCLt$ = debt change included in the current liabilities in year t. $DEPt$ = amortization and depreciation expenses in year t.

Furthermore, balance sheet approach did not include non-current accruals (apart from amortization and depreciation expenses).

CONCEPTUAL REVIEW

Audit services

(1987) indicates that the demand for auditing services can be explained by agency, information, and insurance dimensions. Agency theory suggests that auditing services serve as a monitoring mechanism to reduce agency costs that arise from the conflict of interest between principals and agents. In addition, agency theory explains that an agent himself has incentives to demand a monitoring mechanism to protect his level of wages, because without monitoring, the principals may adjust prices when they expect that self-interested agents may not act in the best interests of principals. From this perspective, auditing services can be viewed as a type of monitoring mechanism and companies demand services to provide evidence that they produce reliable financial statements to financial statements users (e.g., investors, creditors, etc.). The information hypothesis suggests that audited financial statements help investors with their decision making by reducing information risks. Specifically, audited data provides investors with a better estimate of risks and expected returns when making their investment portfolio selections. Finally, the insurance hypothesis suggests that investors and creditors view auditors as having "deep pockets" and that they will be able to recover potential financial losses in bankruptcy from the auditors. Auditors will not only care about potential monetary losses, but they will also be concerned with protecting their reputation. This illuminates the reasons auditors are look for insurance. To date, evidence generally supports the above arguments. For example, Chow (1982) finds that agency costs, measured by greater firm size and higher debt leverage, have positive association with voluntary demand for auditing. In the private market setting, Abdel-Khalik (1993) shows that greater firm size is a significant determinant of



voluntary demand for auditing. In the initial public offering (IPO) market setting, Balvers et al. (1988) and Beatty (1989) document that hiring Big 6 auditors reduces IPO underpricing, which is consistent with the information role of auditing. Menon and Williams (1994) finds that the disclosure of Laventhol & Horwath bankruptcy had an adverse effect on the market price of L&H clients, which supports that market price incorporates the expected insurance coverage from auditors.

Audit Quality.

Supply-side research investigates the factors that affect an auditor's ability to supply better quality audits. DeAngelo (1981) defines audit quality as the joint probability of an auditor's ability to discover and report a breach. Reporting a breach requires auditor independence, and discovery of the fraud involves characteristics of the auditor's ability such as expertise, experience, and knowledge. Of these factors, a large body of studies takes Big N auditors to be high quality auditors. My study focuses on smaller audit firms and revisits the audit firm size issue. Therefore, I review the relevant literature regarding the relationship between auditor size and audit quality in this section. In addition, I summarize the related literature on the recent trend of changes in audit quality with regard to audit firm size.

Audit Firm Size It is commonly acknowledged in academic research that Big N auditors are regarded as higher quality auditors. DeAngelo (1981) argues that auditors earn client-specific quasi rents and they have reputation concerns with respect to their clients. Therefore, auditors with a greater number of clients have lower incentives to cheat when a breach is discovered. Large audit firms may thus provide better quality audits, because they have "more to lose" compared to small audit firms (i.e., they can bear higher potential reputational loss).

To test this argument, most studies use a Big N and non-Big N dichotomous variable and the evidence generally supports that Big N auditors provide superior audit quality. For example, Researchers find that Big N auditors are associated with smaller abnormal accruals (e.g., Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Francis & Krishnan, 1999). Big 4 auditors are sued less often (Palmrose, 1988), and they provide more informative reports. Geiger and Rama (2006) find that Big 4 auditors exhibit higher reporting quality when they issue going-concern audit reports (i.e., lower type I and lower type II error rates). Weber & Willenborg (2003) find that going-concern audit reports by Big 4 auditors have more predictive power as to their clients' bankruptcy in an IPO setting. Behn, Choi, and Kang (2008) show that clients audited by Big N auditors have higher analysts' earnings forecast accuracy and smaller forecast dispersion. In term of information asymmetry,

the use of Big N auditors provides information and reduces the cost of equity or the cost of debt (Khurana and Raman 2004; Fortin and Pittman 2004). Investors also perceive audit quality as higher when it is supplied by Big N auditors (Teoh and Wong 1993, Krishnan 2003). In addition to studies where auditor reputation is represented by the use of Big 4 auditors, studies also investigate other auditor characteristics that may affect audit quality by constraining managers' deliberately discretionary behavior such as expertise, tenure, and independence (Craswell, Francis, and Taylor 1995; Krishnan 2003; Myers, Myers, and Omer 2003; Lennox and Pittman 2008; Gul, Sami, and Zhou 2009; Reichelt and Wang 2010; etc.)

Recent Trends and Second-Tier Audit Firms.

Beyond the Big and Non-Big differentiation, recent studies have turned to examine within Big 4 auditor variations. For instance, studies investigate auditor industry expertise, office size, and cross-country evidence within Big N auditors. Craswell et al. (1995) find that Big N industry experts outperform Big N non-experts. Reichelt and Wang (2010) show that audit quality, as measured by abnormal accruals, the likelihood of meeting or beating analyst forecasts, or the propensity to issue a going-concern audit opinion, is higher when the auditor is both a national and city specific industry specialist. Francis and Yu (2009) find that larger offices of Big 4 auditors provide higher quality when they use client restatements as the measure of audit quality. Using 42 countries as their sample, Francis, Michas, and Seavey (2011) document that concentration within the Big 4 group appears to be detrimental to audit quality. Another line of research examines the emergence of "second-tier" auditors. After SarbanesOxley Act was put into effect, Big 4 auditors face higher resource constraints as to their engagements, which may reduce their audit quality. As recommended by the PCAOB, Big 4 auditors are more costly due to the increasing regulatory costs and the use of some larger nonBig 4 auditors may be a viable alternative to Big 4 auditors in the post-SOX period (Grant Thornton LLP. 2006). In fact, more clients have been observed switching from Big 4 auditors to smaller audit firms as a result of increased audit fees.

Auditor size

Various studies mention auditor size to be a characteristic of audit quality (Becker et al., 1998; Francis et al., 1999). Furthermore, multiple studies examine the relationship between earnings management and auditor firm size (Lennox, 1999). Becker et al. (1998) argue that big six auditors are better able to detect earnings management because of their superior knowledge, and act to detect and report earnings management in order to protect their



reputation. High profile audit firms tend to restrain earnings management thereby enhancing transparency and quality of the audited financial statements. Moreover, Krishnan (2003) argues that large audit firms have greater incentives to protect their reputation due to their larger client base, and therefore higher risk to lose clients. Both Becker et al. (1998) and Francis et al. (1999) report a negative effect of big six auditors on earnings management. Yet, Bédard et al. (2004) and Davidson et al. (2005) fail to report such an effect. Nevertheless, Lin and Hwang (2010) argue that there is a negative relationship between the big 4/5/6 and earnings management. Moreover, using a sample of over 7,000 Indian firms, Houqe et al. (2017) examine the relationship between audit quality and earnings management by distinguishing between big four and non-big four auditors. Their findings suggest that high audit quality reduces earnings management. Tendeloo and Vanstraelen (2008) examined the effect of audit quality (proxying audit quality with auditor size) on earnings management in a crosscountry study. Using a sample of private companies (including 1,022 Dutch private companies) they also find that audits performed by big four audit firms result in less earnings management.

Big 4 Audit firm and Discretionary Accruals

The role of conservatism is to constrain management's opportunistic financial reporting behavior (Watts, 2003). LaFond and Watts (2008) argue that conservatism is a governance tool that reduces managerial ability to manipulate financial statement information. On the other hand, other researchers (e.g. Demski, 2004; Ewert and Wagenhofer, 2005) demonstrate that tighter accounting standards aimed at controlling and limiting accrual based manipulation may lead to increasing real earnings. Cohen et al. (2008) claim that across time managers only changed the instruments used in earnings management, but continue to manage the earnings even in the face of strict accounting standards. Real earnings management may occur, when managers opportunistically influence discretionary expenses, such as research and development expenditure (Bushee, 1998), by timing the sale of assets (Herrmann et al., 2003) or by increasing credit sales or aggressively offering discounts (Roychowdhury, 2007). Graham et al. (2005) state that managers prefer real to accrual-based earnings management, but overall, the choice of the instrument used in earnings management depends on the expected benefit (Cohen and Zarowin, 2010; Baderscher, 2011; Wongsunwai, 2012; Zang, 2012). Managers prefer real earnings management activities because they are harder to detect and less costly (Cohen et al., 2008). Strong investor protection, strong legal enforcement and common law legal systems are fundamental determinants of high quality financial statements (Ball

et al., 2003; Daske et al., 2008; Francis and Wang, 2008). However, auditors are important agents with immense resources and expertise that can detect earnings management and ensure quality in firms' accounting figures (Lin et al., 2014). Francis and Yu (2009) confirmed that larger offices provide higher quality audits, are more likely to issue going concern audit reports, and their clients tend to exhibit less aggressive earnings management behaviors. Conditional conservatism is found to be positively related to audit quality (Francis and Wang, 2008). Chung et al (2003) have also shown that big auditors tend to force conditional conservatism on their clients. A good quality audit promotes accounting policies that reduce information asymmetry (conditional conservatism) and restrict accounting policies that increase information asymmetry (unconditional accounting) (Cano-Rodriguez, 2010). Gore et al. (2001) indicate that big auditors tend to face less losses if they maintain their independence, even if this is against their clients' interests, while they are more concerned with the repercussions of litigation if they are found to be associated with misstatements of financial statements (see also Ho et al., 2010). Likewise, Khurana and Raman (2004) have found that big auditors in the US are more concerned about litigation exposure rather than brand name reputation protection, thereby further reinforcing audit quality. Recently different countries, including United States, United Kingdom and the European Union raised concerns over the concentration of the supply of the Big 4 accounting firms and the potential effect of the concentration on the audit markets and the quality of audits. Francis et al. (2013) found that companies audited by the Big 4 report smaller total and abnormal accruals, and are less likely to report profits and recognize loss timely, which implies that companies audited by the Big 4 will have less incentive to manage their earnings. However, the issue that there are still companies that collapse because of poor audit in other jurisdictions such as in South Africa implies that quality of audit of the Big 4 is the issue that's country specific in nature and should be investigated in light of each countries' specific governance structure. This point is corroborated by Iatridis (2012) who reports that even though firms may be audited by high quality auditors, their institutional differences influence significantly firm's earnings conservatism, agency costs and costs of equity.

Audit Size and Asset turnover/profit margin diagnostic

Ivo, Sundaresh and Teri (2012) propose and test a new diagnostic of earnings management that is based on contemporaneous, directionally opposite changes in two fundamental accounting ratios: asset turnover (ATO) and profit margin (PM). The logic for this diagnostic



follows from the articulation of the income statement and balance sheet, which under fairly general conditions forces ATO and PM to move in opposite directions when firms manage earnings. We therefore hypothesize that contemporaneous increases in PM and decreases in ATO signal upward earnings management, and contemporaneous decreases in PM and increases in ATO signal downward earnings management. Given that earnings management is not directly observable, we validate the ATO/PM diagnostic by assessing whether it is predictive of outcomes and consequences generally associated with earnings management. Specifically, we show that the diagnostic is useful for identifying firms that meet or just beat analyst forecasts, report extreme earnings surprises, subsequently restate earnings, and incur reversals in year-ahead firm performance. We find that the ATO/PM diagnostic has significantly greater discriminating ability for identifying firms that meet or beat expectations, report extreme earnings surprises, and subsequently restate earnings than performance-adjusted abnormal accruals, a widely accepted proxy for earnings management.

Earnings Management

There has been no clear consensus on what is earnings management in the literature (Dechow et al., 1996; Messod, 2001). Although SEC sources often mention "earnings management", none of the SEC sources explicitly defines earnings management (Dechow & Skinner, 2000). The various attempts at defining earnings management in the accounting literature can be categorized into four approaches. Defined in terms of management intent, earnings management is a purposeful intervention in the external financial reporting process, with management intent of obtaining some private gain (Schipper, 1989; Cormier & Magnan, 1996; Bagnoli & Watts, 2000) via, for example, masking the true consequences of management's decisions (Levitt, 1998); the form of the gain might be management benefit and/or firm's benefit (Eighme & Cashell, 2002). On the other hand, Healy & Wahlen (1999) posit that earnings management involves managers using their judgment in financial reporting and in structuring transactions to alter financial statements so as to either mislead some shareholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers. The problem with this approach is that management intent is unobservable. No one can be certain if earnings are manipulated for management or firm's benefit, or to mislead information users. Consequently, the unit 'earnings management' is impossible to be measured directly or operationalized accurately via attributes of reported accounting numbers. In terms of the quality of reported earnings information, United State's former

SEC Chairman Levitt defined earnings management as practices by which "earnings reports reflect the desires of management rather than the underlying financial performance of the company" (See Duncan, 2001). In other words, earnings management is the manipulation of reported earnings so that they do not accurately represent economic earnings at every point in time (Goel & Thakor, 2003). The problem with this approach is that no one knows a firm's underlying or economic earnings due to information asymmetry, making the direct measurement of earnings management defined in this way impossible too.

According to Watts & Zimmerman (1990) and Evans III & Sridhar (1996), earnings management is the strategic exercise of management discretion over accounting numbers with or without restrictions. For Levitt, earnings management is to exploit an advantage of the flexibility in accounting so as to keep pace with business innovations (Levitt, 1998), namely, earnings management is a practice of creative accounting. In a word, earnings management is neither a legitimate nor an illegal practice so long as management discretion over accounting numbers or accounting flexibility is exercised. This approach of defining earnings management in terms of management reporting discretion is also empirically problematic, because there is unlikely to be a control group of "earnings management": managers of all firms are expected to use their discretion of reporting if they are rational and opportunistic. Definitions of earnings management in terms of accounting standard application fall into two major types. First, earnings management is the practice of firms' misapplying accounting standards (e.g. U.S. SEC Chief Accountant Lynn Turner²; Johnson, 1999). To misapply is to use wrongly or for a wrong purpose (Procter, 1987). Thus, earnings management to Turner and Johnson is the practice of using accounting standards (i.e. within the bounds of accounting standards, or legitimate) wrongly or for a wrong purpose – consistent with the approach of defining earnings management in terms of management intent. A related view is held by Dechow & Skinner (2000). They identify three practices: (a) fraudulent accounting practices, (b) earnings management, and (c) the legitimate exercise of accounting discretion. They explained that both practices (b) and (c) are within the constraints of accounting standards, what distinguishes the two is management intent: if the practice is meant to deceive, it is (b), otherwise it is (c). These authors Magrath & Weld (2002). regard earnings management as legitimate practices but with management intent to deceive information users. However, a legitimate practice has nothing to be accused of, no matter what the intent might be, not to mention that intent is unobservable. As for the second type of definition from this approach, earnings management is the process of



taking deliberate steps within the bounds of accounting standards so as to bring reported earnings to a desired level (Brown, 1999). As can be seen, this definition is consistent with what has been discussed about paper earnings management in the section above. Defined in this way, paper earnings management is empirically measurable. To sum up, the four approaches under which earnings management has been defined indicate why earnings are manipulated, what has been manipulated, how earnings are manipulated, and the legitimacy of the way to manipulate earnings respectively. To assess the existence of earnings management for empirical researches, three major approaches have been used in the literature: accruals (i.e. the difference between reported earnings and cash flows from operations), earnings distribution, and return on assets ratio. All the three represent some of the possible consequences of earnings management. Healy & Wahlen (1999) believe that unexpected accruals (i.e. the residual item after total accruals are regressed on variables that are indicators for normal accruals and gross fixed assets) are the evidence of earnings management, because unexpected accruals are the unexplained part of total accruals. On the other hand, Messod (2001) used specific accruals (e.g. the provision for bad debt; accruals in specific sectors, such as the claim loss reserve in the insurance industry) to assess earnings management. However, the accruals approach is problematic for at least three reasons. First, although discretionary accruals might be affected by managerial choices, the relationship between earnings management and unexpected accruals can be no more than an assumption due to information asymmetry; namely, the two are not necessarily of cause-and-effect relationship. Second, unexpected accruals are a noisy variable. Third, the accrual approach is not exhaustive or inclusive, because accruals are only one type of the objects that can be manipulated, other objects include, for example, product costs; and unexpected or specific accruals represent, if may, the existence of paper earnings manipulation only. Goel & Thakor (2003) measures earnings management with earnings distribution: if earnings distribution over various accounting periods is smooth, then earnings in the firms had been managed. This approach is problematic mainly for two reasons. First, smooth earnings distribution is not necessarily caused by earnings management, it might represent actual performance. Second, earnings distribution is also a noisy variable, because earnings manipulation is only one of multiple causes of smooth earnings distribution. Balsam et al. (1995) uses return on assets (i.e. net income / average total assets) to assess earnings management. Being a noisy variable, the ratio is not a necessary cause of earnings management either. In sum, the indicators used to measure earnings management so far are not

representative enough to produce reliable empirical results. Instead, they represent possible consequences of earnings manipulation rather than those of earnings management alone. Other problems in the researches on earnings management include earnings management being observed under various other names, such as "earnings manipulation", "apparent extreme earnings manipulation" (Marin et al., 2002), "window dressing action" (Dutta & Gigler, 2002), or "within-GAAP manipulation" (Dechow et al., 1996); and the term "earnings management" being used to represent different things by different authors. In all, earnings management has been used in the accounting literature to represent five different concepts: earnings manipulation (e.g. Healy & Wahlen, 1999), paper earnings manipulation (e.g. Watts & Zimmerman, 1990), paper earnings fraud (Marin et al., 2002), paper earnings management (Dechow & Skinner, 2000), and creative accounting (Levitt, 1998). An explanation to this phenomenon is a lack of consensus on if earnings management is different from earnings manipulation, if earnings management is fraudulent, and if there is a difference between paper earnings management and real earnings management. As a result, these problems have provoked the confusion in the research on earnings management. In the literature, earnings management is often regarded as the synonym of earnings manipulation, and sometimes as an alternative of earnings fraud. However, the attempt of distinguishing earnings management from earnings manipulation and earnings fraud has been found in the literature. Such attempts may be categorized from the perspective of the number of items identified. In the two-item approach, earnings management is distinguished from "earnings manipulation" (Dechow et al., 1996), "truthful reporting" (Evans III & Sridhar, 1996), "fraud" (Brown, 1999), "fraudulent financial reporting" (Landsittel, 2000), or "outright fraudulent financial reporting" (Marin et al., 2002). In the three-item approach, earnings management is distinguished from "fraudulent accounting practices" and "legitimate exercise of accounting discretion" (Dechow & Skinner, 2000), or "fraud" and "accounting irregularities" (Magrath & Weld, 2002) Real earnings manipulation has often been overlooked in the literature. To Schipper, "real earnings management" is something that is "accomplished by timing investment or financing decisions to alter reported earnings or some subset of it". (Schipper, 1989) Other works contributed to the research on real earnings manipulation include Jambalvo (1996), Goel & Thakor (2003) and Roychowdhury (2003), the most constructive one being Roychowdhury (2003).



Empirical Review

Healy and Wahlen (1999) have reviewed earnings management literature in respect to the usefulness of prior research for standard setters. Fields, Lys and Vincent (2001), have structured their analysis around three types of market imperfections. The third review paper (McNichols, 2000) discusses the trade-offs associated with three research designs commonly used in earnings management literature. '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, p.365). Consistently, Bauwhede et al. (2003) report the audit-quality differentiation between Big 6 and non-Big 6 auditors when they are dealing with income-decreasing earnings manipulation. These results provide underlying rational that large auditors (Big 6) are more competent and provide higher quality service rather than smaller auditors (non-Big 6). However, Ishak, Haron, Nik Salleh & Abdul Rashid (2011) found that auditor types which are Big 4 and non-Big 4 auditors do not affect the discretionary accruals. Furthermore, Bauwhede (2003) do not find any proof of audit quality differentiation between Big 6 audit firm and non-Big 6 audit firm through income-increasing earning manipulation as well, not even in the public listed companies. Since auditors play significant role in detecting any mismanagement done by the manager, there are possibilities of the occurrence of arguments between the auditor and manager because of different ideas and views. Therefore, manager may switch the present auditor to get more favourable auditor (Davidson, Jiraporn & DaDalt, 2006).

Conceptually, auditor switch can occur in different forms such as switching to a larger auditor or switching to a smaller auditor (Lin & Liu, 2010). In a study by Lin & Liu (2010), they found that the firms with weak internal control would be more likely to switch to smaller auditors instead of larger auditor to avoid effective audit monitoring by larger auditor. Consistent with Davidson et al. (2006), this study also stated that firms that switch auditor from big 4 auditor to non-Big 4 auditor and previously received a modified opinion show higher earnings manipulation than companies with qualified opinion. Therefore, in case of auditor switch from smaller auditor to larger auditor, the audit quality should improve and possibly reduce earnings manipulation or tunneling behaviors (Lin & Liu, 2010). In a developing country like Malaysia, the concern of auditor switch is not clearly addressed in any statute, neither the Securities Commissions Act 1985 nor the Companies Act 1965 (Syed Mustapha Nazri et al., 2012;

Abdul Nasser, Abdul Wahid, Syed Mustapha Nazri & Hudaib, 2006). The reasons and initiation of auditor change in Malaysia are not informative because this information is not publicly available as it is not disclosed in the annual report even the information is documented in written representations (Syed Mustapha Nazri et al., 2012). Consistently, in a recent study, Hossain, Mitra, Rezaee (2014) found that the companies are significantly less likely to reveal the causes for their auditor switches if the switches are accompanied by red-flag issues regarding management's integrity and financial reporting quality.

Craswell et al. (1995) note that Big N (i.e., 8/7/6/5/4) auditors may be able to provide higher quality audits than non-Big N auditors because the former group devotes more resources to staff training and developing industry expertise relative to non-Big N firms. Krishnan (2003) posits that because of their size Big N auditors are in a better position, relative to non-Big N auditors, to question or negotiate with clients who attempt to adopt aggressive accounting procedures. That is, relative to non-Big N auditors, Big N firms can more easily absorb the financial loss associated with losing an individual client, which gives them greater independence. Blokdiik et al. (2006) find that an audit quality differential exists for Big N auditors compared to non-Big N auditors not because of the time involved in an engagement but because of differences in audit technologies and how the audits are conducted. There also exists a belief that Big N auditors provide higher quality audits than non-Big N firms because Big N auditors have larger client bases and, therefore, have more to lose in the event of loss of reputation that would be associated with a poorly performed audit (e.g., see Becker et al., 1998). Finally, a significant stream of research suggests that Big N auditors provide higher quality audits relative to non-Big N firms to minimize the litigation risks or costs accompanying a failed audit (e.g., see DeAngelo, 1981; Simunic and Stein, 1996; Khurana and Raman, 2004; Geiger and Rama, 2006). Because of the large audit firms' "deep pockets" and, thus, their huge exposure to litigation risks, these firms may take more conservative approaches to dealing with their clients' questionable transactions than would small audit firms. Becker et al. (1998) suggest that the effectiveness of an audit in constraining earnings management varies directly with the quality of the audit. For the many reasons noted above, there is a presumption in the literature that, relative to non-Big N auditors, Big N auditors provide higher quality audits. As such, research examining the relationship between audit quality and earnings management typically uses auditor size and specifically the Big N versus non-Big N dichotomy as the surrogate measure for audit quality. For these studies conducted in the U.S., the evidence consistently supports the



notion that, relative to non-Big N firms, Big N auditors more aggressively constrain their clients' discretionary accruals and, thus, their ability to manage earnings (e.g., see Becker et al., 1998; Francis et al., 1999; Francis and Krishnan, 1999; Krishnan, 2003). Outside the U.S., though, studies generally provide little or no evidence of an audit quality (i.e., auditor size) differential in terms of constraining earnings management (Vander Bauwhede and Willekens, 2004; Van Caneghem, 2004; Maijoor and Vanstraelen, 2006; Piot and Janin, 2007). Instead, the quality of an audit in non-U.S. countries seems to be a function of the national audit environment. Companies operating in countries with strict audit environments and strong investor protection schemes engage in less earnings management than entities in countries with flexible audit environments and weak investor protection schemes (e.g., see Maijoor and Vanstraelen, 2006; Francis and Wang, 2008).

METHODOLOGY

Research Design: The study employed the ex-post facto research design which entails the utilization of historical/past data to forecast future trends employing econometric or analytical techniques. This form of research design is reliable as it provides objective estimates of study variable relationships free from subjective errors. Thus, the Ex-Post Facto Design was considered to be the right research design for the study. This is because the phenomena under scrutiny have already happened and the variables are obtained and analyzed "as it is" and not subject to control or interference from the researcher. This is in agreement with Kerlinger (1970) who notes that ex-post facto research is one in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables.

Population for the Study: The population of the study consisted of all the industrial sectors' companies quoted on the floor of the Nigeria Stock Exchange from 2010 - 2019 financial years.

Sample and Sampling Techniques: Fourteen (14) quoted industrial goods sector companies in the population formed the sample size. This is because the researchers studied the entire population of industrial goods sector firms and they all possess data necessary for analysis. To this end, the sampling technique used was purposive sampling technique. The firms are as

follows, Dangote, Berger paint, Capplc, Dnmeyer, Betersglass, Iarfarge, Cartix Plc, mm Plc, Porland, avon crown, First aluminum, Austin laz, notore Plc

Nature/Sources of Data: The research study used secondary data that were extracted directly from the audited financial statements and annual reports of the various sampled companies quoted on the floor of the Nigeria Stock Exchange. The data obtained for all the variables in each of the industrial goods sector firms was well thought-out in panels. Agreeing with Baltagi, Bratberg, and Holmas (2005) panel data is appropriate for longitudinal analysis since it makes available time and cross-section dimensions. The extant study covered a period of ten financial years beginning from 2010 to 2019 accounting years.

Methods of Data Collection: As stated above, the data for the study were from secondary sources hence the method of data collection was historical data survey from annual reports of the concerned organizations.

Methods of Data Analyses: The study used multiple regression defined as an equation with two dependent variables and more independent variables. The researchers employed ordinary least square (OLS) estimation technique. The test instruments in the OLS are the T-statistics and F-test which were used to test the significance of variables and the overall significance of the regression respectively. Other test instruments employed are the Durbin Watson test which shall be used to test the presence or absence of autocorrelation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.

RESULTS AND DISCUSSION

Empirical Result and Analysis

Random Effect Result and Analysis

Dependent Variable: ASSET_TURNOVER

Method: Panel EGLS (Cross-section random effects)

Date: 08/18/21 Time: 11:19

Sample: 2008 2019

Periods included: 11

Cross-sections included: 14

Total panel (unbalanced) observations: 151

Swamy and Arora estimator of component variances



Variable	Coefficient	Std. Error	t-Statistic	P-value
K	24.03559	8.251767	2.912781	0.0041
DUMMYSM	-18.95679	9.570460	-1.980760	0.0495
DUMMYBIG	-4.928097	8.842076	-0.557346	0.5781

Table 1 Random Effect Statistics

Source: STATA computation

As the model identification test has shown the acceptance of the null indicates that our model is governed by the random effect process.

We can decompose and fixed the mean equations corresponding to each parameter into the following econometric equation:

$$ASSETTURNOVER = 15.60283 - 4.928097DUMMYBIG_{it} - 18.95679DUMMYSM_{it} + \varepsilon_{it}$$

Starting with equation above, it is clear that result from the pooled OLS is almost repeated in audit size estimates. For instance, the coefficient of -18.95679 % of small audit firm size dummy (DUMMYSM) indicates a positive and significant relationship with asset turnover. Similarly, DUMMYBIG coefficient is - 4.928097% indicating insignificant inverse relationship with assets

turnover. The negative relationships means that our *a priori* expectation is invalid.

Hausman Model Identification test

The Hausman test is employed to select the best estimator given unique effect within the companies. According to the correlated random effect probability, the null of the Hausman test favoring Random effect could not be accepted at 5% level of significance (see appendix VII), hence statistical efficiency is ignored for consistency. The *p*-value of 0.0000 is less than 0.05 level of significance which supports the acceptance Fixed Effect model. This implies that the true model of estimation is the Fixed Effect model which is consistent. Our analysis under the current discretionary ACCRUAL model is based on the results generated by the fixed effect estimator.

2 Empirical Result and Analysis- Effect Specification

Dependent Variable: ACCRUAL

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	p-value
C	0.002936	0.008575	0.342368	0.7327
ACCRUAL(-1)	0.181067	0.088805	2.038925	0.0437
DUMMYBIG	0.021992	0.066897	0.328744	0.7429
DUMMYSM	0.031674	0.090807	0.348804	0.7278

Effects Specification

Cross-section fixed (dummy variables)

<i>R-squared</i>	0.402690	<i>Mean dependent var</i>	-0.008285
<i>Adjusted R-squared</i>	0.317360	<i>S.D. dependent var</i>	0.070371
<i>S.E. of regression</i>	0.058142	<i>Akaike info criterion</i>	-2.729952
<i>Sum squared resid</i>	0.402274	<i>Schwarz criterion</i>	-2.346305
<i>Log likelihood</i>	205.0017	<i>Hannan-Quinn criter.</i>	-2.574047
<i>F-statistic</i>	4.719210	<i>Durbin-Watson stat</i>	2.044890
<i>Prob(F-statistic)</i>	0.000000		

Table 2 Test of company characteristics and earnings management in industrial goods firms with Fixed Effect Source: STATA Computation

Rewriting the panel data model, we have the following specification with the corresponding betas.

$$ACCRUAL_{it} = 0.002936 + \alpha_i + 0.181067ACCRUAL_{t-1} + 0.066897DUMMYBIG + 0.031674DUMMYSM + \varepsilon_{it}$$



The Table 2 result is an unrestricted model result. Unlike the result from the restricted model the evidence of the supremacy of the model incorporating specific effect is clearly observable. The initial negative and significant betas have all turned positive for the big and small size audit firms. Apparently, the coefficient of DUMMYBIG is 0.021992% indicating that assurance services of the major audit firms increases the chance of management manipulation of earnings either as a strategy to escaping implicating opinions of these mighty firms on whether the presented report is free from material bias. In the DUMMYSM proxy the table presents a 0.031674% coefficient indicating another positive relationship with discretionary accrual.

We have also included the lag of ACCRUAL in the model in order to have a robust result by increasing the explanatory power of our model. At the same time the value of our maximum likelihood (reported as log likelihood is 205.0017) improved contrary to initial coefficient of 209.4277 in the restricted model.¹ Similarly the coefficient of determination (r^2) improved.

Nevertheless, the lag of ACCRUAL has a beta of 0.181067% which is significant at 0.0437 (4.37%). This means that history or previous records of discretionary accruals dynamically increases its future amount. Thus, ACCRUAL in the past is a necessary component in the analysis of earnings management.

Overall the null hypothesis that industrial goods giants fixed effects are jointly zero ($H_0: \eta_i = 0$) is rejected at 1% and 5% significance level respectively for the full sample. This however indicates the usefulness of fixed effect panel model that allows for intercompany heterogeneity.

Model Hypotheses Tests

From the outset each of the hypotheses are expressed in the null form.

Hypothesis One: There is no significant relationship between big size audit firm and discretionary accruals.

Interpretation: the observed p -value in the probability section of Table 2 is 0.7429 which is comparatively greater than 0.05 significance level. It therefore customary to reject alternative hypothesis for the null. Thus, the relationship is insignificant.

The pooled OLS is an incomplete model that naturally fails to capture the dynamics of

Hypothesis two: There is no significant relationship between big audit firm and asset turnover/profit margin.

Interpretation: the p -value of big audit firm size is 0.5781 > 0.05 (See Table 1) this means that the null of no significant relationship is accepted. Thus, there is no significant relationship between big audit firm size and assets turnover.

Hypothesis three: There is no significant relationship between small size audit firm and discretionary accruals.

Interpretation: The probability statistics of small audit firm is 0.7278 (See Table 2) which is greater than 0.05, thus we therefore reject alternative hypothesis for the null. Conclusively this relationship is insignificant vis-à-vis discretionary accruals.

Hypothesis four: There is no significant relationship between small audit firm and asset turnover/profit margin.

Interpretation: it can be observed that the probability statistic in DUMMYSM variable is 0.0495 < 0.05 (See Table 1) level of significance. Hence, the decision criterion requires that the alternative hypothesis is accepted. The conclusive inference is that the relationship is profoundly significant between small audit firm size and asset turnover/profit margin.

Discussions of Findings

Discretionary Accrual Model on Audit firm size

Discretionary accruals are adjustments to cash flows selected by the managers within the flexibility of accounting regulations. Given this flexibility, discretionary accruals are the components that often gives managers opportunities to manipulate earnings (Dechow, 1994). Our empirical estimates involving the accrual model gives almost a uniform empirical result in pooled OLS and fixed effect. All the tested variables are negative, however only leverage as an exception is positive and insignificant in the pooled OLS result. The fixed effect results corrected potential weaknesses in the former result as it presents positive but insignificant relationship for the two audit firms' category which corresponds to the findings of McNichols and Wilson (1988). The result provides evidence that H1 holds, implying that companies that are audited by a Big 4 auditor are likely to exhibit lower discretionary accruals. The findings show that Big4 carries a significantly

heterogeneity existing across entities. It is a restricted model by default in every analysis.



negative coefficient, suggesting that companies that are audited by a Big 4 auditor exhibit lower discretionary accruals and therefore are likely to be less prone to earnings management. In fact, by observation the audit firms from the big 4 and corresponding lower ones led by Grant & Thornton are in agreement. This perhaps shows that the influence of audit firm size displays significant corrective tendencies that executives in the firms fear to exploit cheap opportunity for the manipulation of earnings. In simple sentence the use of Price WaterHouse Coopers, Ernest & Young (EY), Deloitte and KPMG and second-tier audit firms may have image of information asymmetry deterrence. This may be why these firms are highly sort after by shareholders who may even use them during casual vacancies due to their protective brand names. Specifically, and in this regard; we find evidence of strict contradiction of *a priori* expectation. It rather complies with the findings of Wallace (1987).

Given such auditing firms sophistication there is no motivation to engage in asymmetric manipulation of information and records of the firm. The reverse could be the case where for instance, local street audit firms are given engagement letter empowering them to make assurance statement. This is where audit expectation gap manifests (see ISA 220 and ISQC 1). Like previous studies finding shows that Big N auditors are associated with smaller abnormal accruals (e.g., Becker, DeFond, Jiambalvo, and Subramanyam, 1998; Francis and Krishnan,).

CONCLUSION

On the basis of the presented empirical results, the following inferential statements guide the conclusive inference found in the body of this research.

1. Wherein an industrial goods producing firms are audited by the super audit firms (e.g KPMG, Deloitte, Ernest & Young, PwC and KPMG) or perhaps the others (eg BDO, RSM, Crowe Horwath, Baker Tilly and Nexia International), decreases manipulation of earnings in the discretionary accruals aspect. These firms work in defense of public interest.
2. It is also our conclusive inference in this research stating that audit firms' sizes relatively have negative effects on asset turnover. Still considering the hypothetical statement, the size of the negative estimate is empirically meaningless in the big 4 auditing firms.

3. Again, even though the selected firms compete in similar industry there is no evidence of mutual cross-sectional dependence according to Pesaran Lagrange multiplier and its latter scaled version. This result justifies the efficiency of the estimated study betas while eliminating error caused by spurious regression.

LIMITATIONS OF THE STUDY

Despite the systematic evidence that our study presents it has obvious shortcomings typical of every social research. This means our acclaimed scientific approach and empirical usefulness of our findings is practically applicable to the extent that important assumptions hold.

5.4 Recommendations

Despite the limitations we have pointed out, it is necessary to make policy suggestions to strengthen activities within the firms.

1. In order to protect public interest via assurance services the local audit firms without any international credentials can outperform the giants in the first tier, therefore firms which could not afford the cost charged by super firms like KPMG and PwC might find comfort and quality services that defeats audit expectation gap. Executives in Cutix cable plc and Austin Laz might insist on the status quo.
2. Giant audit firms should intensify effort in supervising the preparation of accounting statements in the firms to enforce obedience to standards (IFRS and various ISAs)². This will significantly reduce manipulation by executives from assets turnover perspective.
3. Forensic auditing has intensive expert power to detecting fraud committed by doctoring the earnings worth of a firm, thus small audit firms should go the field with forensic experts to double check assurance work.

REFERENCE

1. Abbott, L.J., Daugherty, B., Parker, S., and Peters, G.F. (2016). Internal audit quality and financial reporting quality: the joint importance of independence and competence. *Journal of Accounting Research*, 54(1), p. 3-40.
2. Abbott, L.J., Park, Y. and Parker, S. (2000). The effects of audit committee activity and independence on corporate fraud. *Managerial Finance*, 26(11), p. 55-67.



3. Abbott, L.J., Parker, S. and Peters, G.F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23(1), p. 69-87.
4. Abbott, L.J., Parker, S. and Peters, G.F. (2006). Earnings management, litigation risk and asymmetric audit fee responses. *Auditing: A Journal of Practice & Theory*, 25(1), p. 85-98.
5. Abdul Nasser, A., Abdul Wahid, E., Syed Mustapha Nazri, S., Hudaib, M. 2006. Auditor client relationship: the case of audit tenure and audit switching in Malaysia. *Managerial Auditing Journal*, 21(7), 724-737.
6. Ajekwe, C.M. and Ibiameke, A. (2017). The association between audit quality and earnings management by listed firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 5(4), p. 1-11.
7. Badertscher, B. (2011). Overvaluation and the Choice of Alternative Earnings Management Mechanisms. *The Accounting Review*, 86(5), 1491-1518
8. Balasubramanian, N., B. Black, and V. Khanna. (2010). The Relation between Firm-Level Corporate Governance and Market Value: A Case Study of India. *Emerging Markets Review*, 11(4), 319-340
9. Bauwhede, H. V., Willekens, M., Gaeremynck, A. 2003. Audit firm size, public ownership, and firms' discretionary accruals management. *The International Journal of Accounting*, 38, 1-22. Becker, C.,
10. Bauwhede, H.V., Willikens, M., & Garemynck, A. (2003). Audit Firm Size, Public Ownership and Firms'
11. Discretionary Accruals Management. *The International Journal of Accounting*. Vol: 38. No: 1. pp. 1-22.
12. Beatty, R.P. (1989). Auditor Reputation and The Pricing of Initial Public Offerings. *The Accounting Review*. Vol: LXIV. No: 4. pp. 693-709.
13. Burgstahler, D. and Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, 24(1), p. 99-126.
14. Burnett, B.M., Gordon, E.A., Jorgensen, B.N., and Linthicum, C.L. (2015). Earnings quality: evidence from Canadian firms' choice between IFRS and U.S. GAAP. *Journal of Accounting Perspectives*, 14(3), p. 212-249
15. Defond, M., Jiambalvo, J., Subramanyam, K. 1998. The Effect of Audit Quality on Earnings manipulation. *Contemporary Accounting Research*, 15 (1), 1-24.
16. Che Ahmad, A., Houghton, K., Mohamad Yusof, N. 2006. The Malaysian market for audit services: ethnicity, multinational companies and auditor choice. *Managerial Auditing Journal*, 21(7), 702-723.
17. Chih, H.-L., Shen, C.-H., Kang, F.-C. (2008). Corporate Social Responsibility, Investor Protection, and Earnings manipulation: Some International Evidence. *Journal of Business Ethics*, 79, 179-198.
18. Davidson, W., Jiraporn, P., DaDalt, P. 2006. Causes and Consequences of Audit Shopping: An Analysis of Auditor Opinions, Earnings manipulation, and Auditor Changes. *Quarterly Journal of Business & Economics* 45.
19. DeAngelo, L. 1981. Auditor Size And Audit Quality. *Journal of Accounting and Economics* 3, 183-199.
20. DeAngelo, L.E. (1986). Accounting Numbers as Market Valuation Substitutes: A Study of Management Buyouts of Public Stockholders. *The Accounting Review*. Vol: 61. No: 3. pp. 400-420.
21. Deangelo, H., DeAngelo, L.E., Skinner, D.J. (1994). Accounting Choice in Troubled Companies. *Journal of Accounting and Economics*. Vol: 17. pp. 113-143.
22. Dechow, P.M., Sloan, R.G., & Sweeney, A.P. (1995). Detecting Earnings Management. *The Accounting Review*. Vol: 70. No: 2. pp. 193-225.
23. DeFond, M.L., Jiambalvo, J. (1991). Incidence and Circumstances of Accounting Errors. *The Accounting Review*. Vol: 66. No: 3. pp. 643-655.
24. DeFond, M.L., & Jiambalvo, J. (1993). Factors Related to Auditor-Client Disagreements Over Income-Increasing Accounting Methods. *Contemporary Accounting Research*. Vol: 9. No: 2. pp. 415-431.
25. DeFond, M.L., & Jiambalvo, J. (1994). Debt Covenant Violation and Manipulation of Accruals. *Journal of Accounting and Economics*, Vol: 17. No: 2. pp. 145-176.
26. Dopuch, N. & Simunic, D. (1982). The Competition in Auditing: An Assessment. *Symposium on Auditing Research IV*. Urbana: University of Illinois.
27. Fargher, N., Lee, H.-Y., Mande, V. 2008. The effect of audit partner tenure on client



- managers' accounting discretion. *Managerial Auditing Journal*, 23(2), 161-186.
28. Fields, T., T. Lys, and L. Vincent (2001). Empirical Research on Accounting Choice. *Journal of Accounting and Economics*, 31(1-3), 255-307.
 29. Firth, M., Rui, O., Wu, X. 2012. How Do Various Forms of Auditor Rotation Affect Audit Quality? Evidence from China. *The International Journal of Accounting*, 47, 109–138.
 30. Francis, J. & Krishnan, J. (1999). Accounting Accruals and Auditor Reporting Conservatism. *Contemporary Accounting Research*. Vol: 16. No: 1. pp. 135-165.
 31. Francis, J., Maydew, L.E., & Sparks, H.C. (1999). The Role of Big 6 Auditors in The Credible Reporting of Accruals. *Auditing: A Journal of Practice & Theory*. Vol: 18. No: 2. pp. 17-34.
 32. Francis, J.R. & Wang, D. (2004). Investor Protection, Auditor Conservatism and Earnings Quality: Are Big 4 Auditors Conservative Only in The United states? Working Paper, University of Missouri. Columbia.
 33. Goncharov, I 2005, 'Earnings Management and its Determinants: Closing Gaps in Empirical Accounting Research', Peter Lang
 34. Ghosh, D., and L. Olsen. (2009). Environmental Uncertainty and Managers' Use of Discretionary Accruals. *Accounting, Organizations and Society*, 34(2), 188-205
 35. Gul, F., C. Chen, and J. Tsui. (2003). Discretionary Accounting Accruals, Managers' Incentives, and Audit Fees. *Contemporary Accounting Research*, 20(3), 441-464.
 36. Gunny, K. 2005. What Are the Consequences of Real Earnings manipulation?
 37. Hassan, S., Ahmed, A. 2012. Corporate Governance, Earnings manipulation and Financial Performance: A Case of Nigerian Manufacturing Firms. *American International Journal of Contemporary Research* 2 (7) , 214-226
 38. Healy, P., Wahlen, J. (1999). A Review of the Earnings manipulation Literature and Its Implications for Standard Setting. *Accounting Horizons*, 13(4), 365-383.
 39. Healy, P.M. (1985). The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics*. Vol: 7. No: 1-3. pp. 85-107.
 40. Henseler, J. (2015). Regression analysis – technique lecture. Presentation, University of Twente, Enschede, the Netherlands.
 41. Hohenfels, D. (2016). Auditor tenure and perceived earnings quality. *International Journal of Auditing*, 20, 224-238.
 42. Holm, C., and Zaman, M. (2012). Regulating audit quality: Restoring trust and legitimacy. *Accounting Forum*, 36, p. 51-61.
 43. Holthausen, R., Larcker, D. and Sloan, R. (1995). Annual bonus schemes and the manipulation of earnings. *Journal of Accounting and Economics*, 19, p. 29-74.
 44. Houqe, M.N., Ahmed, K. and van Zijl, T. (2017). Audit quality, earnings management, and cost of equity capital: Evidence from India. *International Journal of Auditing*, Submitted for publication, DOI: 10.1111/ijau.12087
 45. Hossain, M., Mitra, S., Rezaee, Z.(2014). Voluntary disclosure of reasons for auditor changes and the capital market reaction to information disclosure. *Research in Accounting Regulation*, <http://dx.doi.org/10.1016/j.racreg.2014.02.004>.
 46. Hribar, P. & Collins, D. W. (2002). Errors in Estimating Accruals Implications for Empirical Research. *Journal of Accounting Research*. Vol: 40. No: 1. pp. 105-134.
 47. Ishak, I., Haron, M., Nik Salleh, N., Abdul Rashid, A. (2011). Family Control and Earnings manipulation: Malaysia Evidence. *International Proceedings of Economics Development & Research*, 22.
 48. Ishak, A., Mansor, N., Sutan Maruhun, E. (2013). Audit market concentration and auditor's industry specialization. *Social and Behavioral Sciences* 91, 48 – 56.
 49. Jensen, M., Smith, C. (1985). Stockholder, manager, and creditor interests: application of agency theory.
 50. Theory of the Firm, 1(1).
 51. Jeong, S.W. (1999). The Comparison of the Results of Audit Report Review Between Big 6 and non Big 6 Auditors. *Accounting and Auditing Research*. Vol: 35. pp. 193-217.
 52. Jeong, S.W. & Rho, J. (1999). The Effect of Auditor Change on the amount of Prior Year Adjustment. *Korean Accounting Journal*. Vol: 20. pp. 161-179.
 53. Jeong, S.W. & Rho, J. (2004). Big Six Auditors and Audit Quality: The Korean Evidence. *The*



- International Journal of Accounting. Vol: 39. pp. 175-196.
54. Jiraporn, P., G. Miller, S. Yoon, and Y. Kim. (2008). Is Earnings Management Opportunistic or Beneficial? An Agency Theory Perspective. *International Review of Financial Analysis*, 17(3), 622-634.
55. Jones, J.J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research*. Vol: 29. No: 2. pp. 193-228
56. Kim, H & Yoon, S 2009, 'Firm Characteristics and Earnings Management of Different Types of Security Issuers', Available at SSRN 1325952
57. Kim, J.B., Yi, C. (2009). Does auditor designation by the regulatory authority improve audit quality? Evidence from Korea. *Journal Account Public Policy* 28 , 207–230.
58. Kim, M. & Hwang, I. (1998). The Effect of Audit Quality Difference on Prior Year Adjustments. *Korean Accounting Journal*. Vol: 20. No: 2. pp. 323-359.
59. Kim, J.R., Chung, R., & Firth, M. (2003). Auditor Conservatism, Asymmetric Monitoring and Earnings Management. *Contemporary Accounting Research*. Vol: 23. No: 2. pp. 1-26.
60. Krishnan, G.V. & Gul, F.A. (2002). Has Audit Quality Declined? Evidence From The Pricing of Discretionary Accruals. Working Paper. City University of Hong Kong.
61. Krishnan, G.V. (2003). Audit Quality and The Pricing of Discretionary Accruals. *Auditing: A Journal of Practice & Theory*. Vol: 22. No: 1. pp. 109-126
62. Kothari, S., Leone, A., Wasley, C. (2005). Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics*
63. Krishnan, G. (2003). Does Big 6 Auditor Industry Expertise Constraint Earnings manipulation? *Accounting Horizons*, 1-16.
64. Lee, H.L., Lee, H. (2013). Do Big 4 audit firms improve the value relevance of earnings and equity? *Managerial Auditing Journal*, 28(7), 628-646.
65. Lin, J. W., Li, J.F., and Yang, J.S. (2006). The effect of audit committee performance on earnings quality. *Managerial Auditing Journal*, 21(9), p. 921-933.
66. Lin, Z., Liu, M. (2010). The determinants of auditor switching from the perspective of corporate governance in China. *Advances in Accounting, incorporating Advances in International Accounting* 26, 117–127.
67. McNichols, M., and S. Stubben. (2008). Does Earnings Management Affect Firms' Investment Decisions? *The Accounting Review*, 83(6), 1571-1603.
68. Mostafa Mohamed, D., Habib, M. (2013). Auditor independence, audit quality and the mandatory auditor rotation in Egypt. *Education, Business and Society: Contemporary Middle Eastern Issues*, 6(2), 116-144.
69. Palmrose, Z. (1986). Audit fees and auditor size: further evidence. *Journal of Accounting Research*, 24(1), p. 97-110.
70. Palmrose, Z. (1999). Empirical research in auditor litigation: considerations and data. *American Accounting Association*. Palmrose, Z. (2013).
71. PCAOB Audit regulation a decade after SOX: Where it stands and what the future holds. *Accounting Horizons*, 27(4), p. 775-798.
72. Peasnell, K.V., Pope, P.F. and Young, S. (2000a). Accruals management to meet earnings targets: UK evidence pre- and post-Cadbury. *The British Accounting Review*, 32(4), p. 415-438.
73. Peasnell, P., Pope, P. and Young, S. (2000b). Detecting earnings management using cross-sectional abnormal accruals models. *Accounting and Business Research*, 30, p. 313-326.
74. Prentice, R. (2007). Ethical decision making: More needed than good intentions. *Financial Analysts Journal*, 63(6), p. 239-258.
- PriceWaterHouseCoopers LLP (2015). EU audit reform – mandatory firm rotation – fact sheet 1. Retrieved May 3, 2017, from: <http://www.pwc.com/gx/en/audit-services/publications/assets/pwc-fact-sheet-1-summary-of-eu-audit-reform-requirementsrelating-to-mfr-feb-2015.pdf>
75. PriceWaterHouseCoopers LLP (2016). Our focus on audit quality: 2016 report. Retrieved February 17, 2017, from: <http://www.pwc.com/us/en/audit-assurance-services/publications/assets/pwc-auditquality-report-2016.pdf>
76. Rahman, M., Moniruzzaman, M., Sharif, M. (2013). Techniques, Motives and Controls of Earnings manipulation. *International Journal of Information Technology and Business Management*, 11(1), 22-34.
77. Syed Mustapha Nazri, S., Smith, M., Ismail, Z. (2012). Factors influencing auditor change:



- evidence from Malaysia. *Asian Review of Accounting*, 20(3) , 222-240.
78. Tendeloo, B. van, and Vanstraelen, A. (2005). Earnings management under German GAAP versus IFRS. *European Accounting Review*, 14, (1), p. 155-180.
 79. Tendeloo, B. van, and Vanstraelen, A. (2008). Earnings management and audit quality in Europe: Evidence from the private client segment market. *European Accounting Review*, 17(3), p. 447- 469.
 80. Schipper, K. (1989). Commentary on earnings management. *Accounting Horizons*. Retrieved from http://scholar.google.com.my/scholar?q=Commentary+on+earnings+management&btnG=&hl=en&as_sdt=0,5#0
 81. Subramanyam, K. (1996). The Pricing of Discretionary Accruals. *Journal of Accounting & Economics*, 22 (August-December), 249-281.
 82. Sun, W., Sun, J. 2007. Analysis on Factors Influencing Managers' Earnings manipulation Intentions. Working Paper, Agricultural University, Hebei, PR China, 477-482.
 83. Wilcox, R.R. (2003). Applying contemporary statistical techniques. University of Southern California, Los Angeles.
 84. Woolf, A.H. (1912). *A short history of accountants and accountancy*. London:
 85. Gee, Wu, R. (2014). Predicting earnings management: A nonlinear approach. *International Review of Economics and Finance*, 30, p. 1-25.
 86. Xie, B., Davidson, W.N. and Dadalt, P.J. (2003). Earnings management and corporate governance: the roles of the board and the audit committee. *Journal of Corporate Finance*, 9, p. 295-314.
 87. Zakaria, N., Daud, D. 2013. Does Big 4 Affect the Earnings Response Coefficient (ERC)? Evidence From Malaysia. *Journal of Modern Accounting and Auditing*, 9(9), 1204-1215
 88. Ziaee, M. (2014). The effect of audit quality on the performance of listed companies in Teheran Stock Exchange. *International Letters of Social and Humanistic Sciences*, 21, p. 36-43