The Effects of Financial Reporting Standards on Tax Avoidance and Earnings Quality: A Case of an Emerging Economy

Mohammed Amidu
University of Ghana Business School, Ghana

Sally Mingle Yorke
University of Ghana Business School, Ghana

Simon Harvey
University of Ghana Business School, Ghana

This paper analyses the implications of adoption of International Financial Reporting Standards (IFRS) for accounting information quality and tax avoidance. It employs a sample of 119 firms after the implementation of IFRS to test for two related hypotheses. First, IFRS reduces the incidence of tax avoidance as the level of earnings quality increases when firms use internal funding to increase their profitability levels. Building on these results, the second test suggests that the relatively high quality earnings and low incidence of tax avoidance among firms in Ghana is attributed to the adoption of IFRS and the interaction of firm size to equity capital and the strategy of firms in Ghana to finance their operations with debt.

INTRODUCTION

In recent times, corporate tax avoidance (CTA) has become a major research concern receiving increasing attention both practically and in academic research. These have drawn public attention to the growth of tax-avoidance mechanisms such as transfer-pricing, re-invoicing, offshore special purpose vehicles, corporate inversions, dubious charitable trusts and other vehicles for tax abuse (Christensen and Murphy, 2004; Desai and Dharmapala , 2005; Caj and Liu, 2009). Tax avoidance has been stated as one of the mechanisms that offer room for opportunistic managers to divert rent from shareholders to themselves to satisfy their individual self- interest. Prior research have linked avoidance with earnings management (EM) by arguing that tax avoidance demands scheming actions that can be bundled with diversionary activities, including earnings manipulation to advance the interests of managers rather than shareholders (Desai and Dharmapala, 2009;2006; Desai et al., 2007; Desai and Dharmapala, 2005; Desai, 2005). Tax avoidance techniques are secretive in nature and require manipulation of transactions to guarantee some tax benefits while shielding it from tax authorities (Desai and Dharmapala, 2009; 2006). This makes it difficult at any point in time for shareholders to ascertain their actual tax obligations and also to monitor managerial actions. This leaves loopholes which can be exploited by managers to pursue self- seeking objectives and manage earnings in ways that provide benefits to them and not necessarily to shareholders. By manipulating earnings to gain some tax benefits and diverting rents, managers affect the

quality of their financial reporting. This implies that for managers to be able to avoid taxes, they would need to manipulate earnings which also afford room to opportunistic managers to divert rent to themselves at the detriment of shareholders. Hence prior researchers agree that avoidance techniques and earnings manipulation techniques are complementary (Desai et al., 2007; Desai and Dharmapala, 2005; Desai, 2005). According to Schipper (1989), tax expense meets the necessary condition for EM. Dhaliwal et al (2004) confirms this by asserting that when managers have an incentive to achieve a particular earnings target, the tax expense account provides a final opportunity for EM.

Davidson III et al. (2004) define EM as the use of flexible accounting principles that allow managers to influence reported earnings, thereby causing reported income to be larger or smaller than it would otherwise be. EM, according to Healy and Wahlen (1999) occurs when management 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 results. EM therefore connotes a purposeful intervention in the external financial reporting process, with the intent to either mislead some stakeholders about the underlying economic outcomes or to influence contractual outcomes that depend on reported accounting numbers (Healy and Wahlen, 1999), or to obtain some private gain (Schipper, 1989). This negatively impacts on the accounting reporting quality. To remove allowable accounting alternatives and ensure accounting measurements that better reflect a firm's economic performance (Barth et al., 2006), the International Accounting Standards Board (IASB) set out to develop an internationally acceptable set of high quality international financial reporting standards (IFRS). Hence these standards are therefore expected to improve upon the relevance, reliability, understandability and comparability of financial reporting which were not be achieved by relying on information in applying individual national standards especially in cases where local standards are influenced by national, legal, political and taxation agendas (Ball, 2006).

Following the adoption and adaption of IFRS, lots of research has been conducted to assess the influence of IFRS on financial reporting quality. These studies have empirically tested the relationship with inconclusive results. Whiles some find improvement in the accounting information quality of some countries that adopted International accounting standards (Meeks and Swann 2009; Chen et al., 2010; Chua et al., 2012) others do not see any significant improvement in reporting quality (Kao and Wei, 2014) whiles others argue that information quality deteriorated with the adoption of IFRS (Jeanjean and Stolowy, 2008). Another stream of research find improvement in accounting quality but are quick to mention other factors that could contribute to the improvement besides the adoption of international standards (Barth et al., 2006; Soderstrom and Sun, 2007) Various reasons have been advanced to explain the disparities in the results. Ball (2006) argues that, the quality of accounting depends on the political and institutional environment in which the business operates. Others also attribute it to the firm specific characteristics of sampled firms. Thus IFRS on its own cannot influence reporting quality unless other factors are also taken into consideration.

This paper is based on this on-going debate and expects that where IFRS has a positive impact of financial reporting quality, managers will have less room to manipulate earnings and divert rent to themselves hence EM is expected to reduce. The impact of this is that, managers will not engage in tax avoidance activities since it will not create any private benefit to them. On the other hand, where IFRS has little or no influence on reporting quality, and therefore offers room for opportunistic managers to engage in EM, it is expected that managers will engage more in avoidance activities so they can use the opportunity engage in EM and divert rent for themselves.

This paper seeks to make two main contributions. First, it adds to prior literature by assessing the implications of IFRS on the relationship between EM and tax avoidance. Second, the paper brings to bear the impact of the adoption of IFRS on reporting quality from an emerging economy's perspective and also assess whether the adoption has any influence on the relationship between EM and tax avoidance. This paper is timely for a developing country and for that matter Ghana as adoption of IFRS in 2007, provides policy guideline directions on the effectiveness of IFRS in improving the quality of accounting in the country. This also provides information to international accounting standard setters on how effectively the

standards they set meet the objective of improved reporting quality. Thus the paper contributes to current debate on whether the institution of high quality standards is a sufficient means of improving upon reporting quality.

The rest of the paper is organized as follows: the next section reviews existing literature, section 3 provides detailed methodological approaches to achieving the research objectives. The measures for EM, CTA, and other control variables are ascertained based on prior studies. Section 4 contains empirical results and section 5 concludes the paper.

REVIEW OF PRIOR LITERATURE

This paper is underpinned by the agency theory to explain the relationship between corporate tax avoidance and earnings management where it is inferred from the conflict of interest between shareholders and management that, management will not be willing to engage in avoidance even though it is value enhancing to shareholders unless they can get some private benefit from engaging in avoidance activities. Underlying the agency theory is the assumption that individuals are self-interested characters who act rationally to maximise their own personal economic gain (Jensen, 2005; Donaldson and Davis, 1991; Crutchley and Hansen, 1989). Hence when they are engaged in any cooperative endeavour their interests are bound to conflict over certain issues at a point in time. Given the assumptions of agency theory that agents are motivated by self-interest, are rational actors, and are risk-averse, then in a modern corporation, where shares are widely held and there is separation between stock ownership and control over public firms, managers may have personal goals that compete with those of shareholders (Stroh et al., 1996; Donaldson and Davis, 1991; Crutchley and Hansen, 1989; Eisenhardt, 1989). Thus, if both parties to the relationship are utility maximisers, then given the self-interest of individuals, the agent may or may not behave according to the agency agreement (Eisenhardt, 1989).

Managers are responsible for the running of the business and therefore have complete information on the affairs of the business which is usually lost to shareholder. This usually results in information asymmetry where the managers have information exclusive to them that shareholders do not have knowledge of (Scott, 2003). Information asymmetry increases the ability of insiders to profit from their information advantage resulting in agency problems (Scholtens and Kang, 2013; Prior et al., 2008; Campbell, 2007; Dye, 1988). Several studies document evidence that the existence of information asymmetry between managers and shareholders is a necessary condition for EM (Rusmin, 2010; Desai and Dharmapala, 2009; Desai and Dharmapala, 2005). EM can therefore be seen as agency cost because it is used as a tool by managers to pursue their own interest to the detriment of stakeholders (Scholtens and Kang, 2012; Rusmin, 2010). Some researchers such as Leuz et al (2003) further argue that, managers and controlling owners have incentives to manage reported earnings in order to mask true firm performance and to conceal their private control benefits from outsiders (Leuz et al., 2003; Beatty et al., 2002; Jerzemowska, 2006). According to Healy and Wahlen (1999), intention to manage earnings is driven by some underlying motives such as window dressing of financial reports prior to public offerings, to meet bonus targets in order to increase management compensation, to avoid violating debt contracts, to reduce regulatory cost or increase regulatory benefits. Scott (2003) categorizes these motivations into political motivations, taxation motivations, changes in CEO, other contractual motivations, initial public offerings, and also to communicate information to investors. Similarly, Desai and Dharmapala (2005) argue that EM offers room for opportunistic managers to divert rents to themselves at the detriment of Shareholders. They therefore describe EM as a transfer of value from shareholders to management. According to Hunt et al. (2000), in an efficient market, when management opportunistically adjust earnings to transfer wealth from shareholders to themselves, opportunistic earnings smoothing will not be positively related to equity value. Prior research has revealed the detrimental impact of EM on firm performance (Fernandes and Ferreira, 2007; Friebel and Guriev, 2005). Accordingly Hanlon and Slemrod (2007) submit that, the market will have a negative reaction to stock prices of firms that engage in corporate misdeeds such as earnings manipulations. Managers therefore have incentive to mask their opportunistic behaviour and avoidance techniques afford them the mechanisms to achieve this end. Using

a real-world tax shelter and a stylized example to demonstrate how tax shelter products enable managers to manipulate reported earnings, Desai and Dharmapala (2009) emphasizes that, TA techniques are secretive in nature and require manipulation of transactions to guarantee tax benefits while shielding such actions from tax authorities. This makes it difficult for shareholders to monitor managers and thus makes it easy for managers to use the same techniques to pursue their own personal interest to the detriment of shareholders. Dhaliwal et al (2004) investigated whether income tax expense is regularly used to achieve earnings targets and concluded that tax expense provides a final opportunity to meet earnings targets after the firm has agreed to any pre-tax adjusting entries required by the independent auditors. In their review of tax research, Hanlon and Heitzman (2010) found at least three tax-related items which are thought to be available for earnings management: the valuation allowance, the tax contingency reserve, and the amount of foreign earnings designated as permanently reinvested. Income Taxation, according to Scott (2003) is the most obvious reason for earnings management. It can be deduced therefore that management who engage in EM to pursue private gains are more likely to avoid taxes as avoidance offers them a shield to cover up their misdeeds.

Earnings Management affects reporting quality. Thus following the accounting scandals that hit high profiled companies like Enron, Worldcom, Pamalat, calls have been made for increasing mechanisms that can be used to curb opportunistic behaviours of management (Desai, 2005). According to Levitt (1998), earnings management occurs when management abuse the flexibility accorded them by accounting standards. This implies that earnings management results from the manipulative use of discretionary accruals offered by accounting standards to management in their preparation of the financial reports (Phillips et al., 2004; Hanlon, 2005). Consequently any test for earnings management is a measure of the discretion management has over earnings (McNichols, 2001; Healy and Wahlen, 1999). To remove allowable accounting alternatives and ensure accounting measurements that better reflect a firm's economic performance (Barth et al., 2006), the International Accounting Standards Board (IASB) set out to develop an internationally acceptable set of high quality international financial reporting standards (IFRS). Hence these standards are therefore expected to improve upon the relevance, reliability, understandability and comparability of financial reporting which were not achieved by relying on information applying individual national standards especially in cases where local standards are influenced by national, legal, political and taxation agendas (Ball, 2006). The adoption of IFRS is thus expected to bring an improvement in reporting quality and reduce the incidence of earnings management. Some prior researchers find evidence of a negative relationship between EM and IFRS which confirms the improvement in reporting quality after the adoption/adaption of IFRS (Sellami and Fakhfakh, 2013; Barth et al. 2006) For instance, Barth et al. (2006) find that, firms applying IAS from 21 countries generally evidenced less earnings management, more timely loss recognition, and more value relevance of accounting amounts than that of matched sample of firms applying non-U.S. domestic standards. Houqe et al. (2012) study the effect of mandatory IFRS adoption on earnings quality in countries which exhibit high financial secrecy and found evidence that mandatory IFRS adoption improves earnings quality by decreasing abnormal accruals and earnings conservatism. Other researchers report an indirect positive impact of IFRS on reporting quality. They argue that IFRS improves the mechanisms firms put in place internally to improve reporting quality. Marra et al. (2011) for instance assess the impact of board independence and the existence of an audit committee on earnings management and find results which suggest that IFRS significantly contributes to the effectiveness of the two corporate governance mechanisms which play an important and effective role in reducing earnings management.

On the other hand, other groups of researchers found contrary results. Some researchers (Kao and Wei, 2014) did not find any significant improvement in reporting quality after the adoption of IFRS. For instance, Rodriques, et al., (2012) analyse the effect of the IFRS adoption in the earnings quality reported by the Brazilian and European public firms found evidence which showed that the quality of accounting information has not significantly improved comparing the period before and after the adoption of the IFRS in Brazil or Europe. On the other hand some researchers actually found evidence of decreased quality of reporting and increase in EM after adoption. Jeanjean and Stolowy (2008) find that the pervasiveness of earnings management did not decline after the introduction of IFRS, and in fact

increased in France. Additionally, Capkun et al. (2013) re-examine whether the transition to IAS/IFRS deters or facilitates greater earnings management and find an increase in earnings management from pre-2005 to post-2005 for Early Voluntary Adopters and Late Adopters in countries that allowed early IAS/IFRS adoption, and for Mandatory Adopters in countries that did not allow early IFRS adoption.

Following the inconclusive results on the role played by IFRS in improving reporting quality, this paper extends prior studies by empirically analysing the implications of IFRS on the relationship between CTA and EM. A positive impact of IFRS is expected to improve reporting quality and therefore reduce the EM. When this happens, it is expected that the incidence of tax avoidance will also reduce as managers will have less incentives to manipulate earnings. On the other hand, where IFRS does not result in improve reporting quality, EM is expected to rise. When this happens, managers get more room to abuse the flexibility accorded them by accounting standards and manage earnings to satisfy their self-interest. Managers try to conceal their opportunistic behaviour by agreeing to engage in tax avoidance for shareholders. Hence the incidence of tax avoidance is also expected to increase when EM increases after the adoption of IFRS.

EVALUATING METHODOLOGY

Data Sources

The paper draws its sample from non-financial firms listed on the Ghana Stock Exchange (GSE) as well as non-listed firms from Ghana Revenue Authority (GRA) database. Due to the nature of key variables of the paper (IFRS, Tax Avoidance and Earnings Management), the paper excludes financial institutions due to the peculiar nature of their accruals and their need to meet other reporting requirements. Since the paper focuses on tax avoidance, companies that are part of the Ghana Freezone board are excluded from the sample. Freezone companies in Ghana are legally exempted from paying taxes and as a result we cannot assess tax avoidance of such companies. Hence to achieve uniformity, comparability and understandability of data collected and to reduce data distortion to the barest minimum, this paper focuses on 119 non-financial firms from GSE and GRA. Following Rohaya et al., 2008), loss-making firms are included in the study firms as earnings can be either managed upwards or downwards. This implies that tax avoidance practices may include recording transactions to incur losses. Thus effective tax rate on loss making firm is recorded as zero. The zero is then compared with the statutory rate of the year of loss, the difference is recorded as the tax avoidance figure.

Variable Measurement

The paper focuses on periods after the adoption of IFRS. Hence there is no need to distinguish the periods between pre and post IFRS adoption period. However, a dummy variable is used as a measure of IFRS implementation since some of the firms were not preparing their financial report using IFRS. Hence an attribute of 1 is used to indicate the use of IFRS in financial reporting and 0 if otherwise.

In line with prior studies (Sun & Rath, 2010; Rusmin, 2010; Dechow et al., 1995), the paper adopts the discretionary accruals measure as the proxy for earnings management (earnings quality). Based on the discretionary accrual method, total accrual is estimated as;

$$TAC_{it} = (\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta LTD_{it} - \Delta ITP_{it}) - DPA_{it} \quad (1)$$

Where TAC_{it} is the total accrual for firm i in time period t; ΔCA_{it} is the change in current assets for firm i in time period t-1 to t; $\Delta Cash_{it}$ is the change in cash balance for firm i in time period t-1 to t; ΔCL_{it} is the change in current liabilities for firm I in time period t-1 to t; ΔLTD_{it} is the change in long-term debt included in current liabilities for firm I in time period t-1 to t; ΔITP_{it} is the change in income tax payable firm i in time period t-1 to t; and DPA_{it} *is* the depreciation and amortisation expense for firm i in time

period t-1 to t. TAC_{it} is then decomposed into normal accruals (NAC_{it}) and discretionary accrual (DAC_{it}) using the modified Jones (1991) model defined as:

$$\frac{TAC_{it}}{TA_{it-1}} = \alpha_1 \left[\frac{1}{TA_{it-1}}\right] + \beta_2 \left[\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}}\right] + \lambda_3 \left[\frac{PPE_{it}}{TA_{it-1}}\right] + \varepsilon_{it} \quad (2)$$

Where TAC_{it} is total accrual for firm i in year t; $TA_{i,t-1}$ is total assets for firm i at the end of year t-1; ΔREV_{it} is change net sales for firm i between years t=1 and t; ΔREC_{it} is change in receivables for firm i between years t -1 and t; PPE_{it} is gross property, plant and equipment for firm i in the year t and ε_{it} is the error term. NACit is estimated as the fitted value from the equation (2) above. DACit is the residual of NACit from TACit (TACit minus NACit). Discretionary accruals (DACit) for firm i at year t is the absolute value of the residual from the estimation model.[1]

To ascertain corporate tax avoidance, the difference between the statutory tax rate (STR) and the effective tax rate (ETR) is determined. A positive difference amounts to tax savings (tax avoidance) and a negative difference implies additional tax cost. All things being equal, the wider the gap between the ETR and the STR (i.e. STR> ETR), the higher the tax savings from tax planning. The ETR approach has been adopted by previous researchers including (Gupta and Newberry 1997; and Noor and Fadzillah, 2010). The strength of the ETR approach lies in the fact that the data required can be accessed without direct correspondence with the firm and the tax authorities.

The ETR as defined by Hanlon and Heitzman (2010) is the total income tax expense per the pre-tax accounting income. The ETR measure is considered as a better measure because it does not lend itself to alteration by any tax strategy that defers taxes. It also shows clearly that items that are not tax planning strategies, such as changes in the valuation allowance or changes in the tax contingency reserve could affect accounting earnings. According to Frank et al. (2009) the ETR reflects permanent book-tax differences and other statutory adjustments included in the rate reconciliation schedule of a firm's income tax footnote.

Inger (2013) used a modified version of the ETR, called cash effective tax rate (CETR). By this method, one measures the effective tax rate by using tax expenses paid (tax paid in the statement of cash flow) rather than using the total tax expense incurred for the period. This modification, in my opinion, is suitable for studies that seek to ascertain the effect of the various tax planning components (namely, permanent tax differences, temporary tax differences, net operating losses, and foreign tax (differentials) on firm performance.

This paper uses the ETR information to measure firms' tax avoidance. Noor and Fadzillah, 2010) computes the ETR as the total corporate tax expense divided by net profit before tax. This definition suggests that tax planning only seeks to minimize tax burden. Tax avoidance does not only seek to minimize tax burden but also to postpone payment of tax. To cater for the "deferment" objective of tax planning, it is necessary to modify the numerator as total tax expense less deferred tax expense. Thus, this paper measures ETR as total corporate tax expense minus deferred tax expense and divide the result by Net profit before corporate tax. The comparable applicable statutory tax rate is arrived at after adjusting for all reliefs and rebates. The Internal Revenue Act, 2000 (Act 592) of Ghana contains reliefs and rebates that have the potential of reducing the general statutory rate of twenty five per cent (25%). It is therefore appropriate to adjust for these reliefs and rebates to enhance drawing of meaningful conclusion on the STR-ETR difference.

In order to investigate IFRS influence on EM and CTA across various firms from various industries, there is the need to control for the compounding effects arising from cross-sectional factors (Rusmin, 2010; and Beatty et al, 2002). It has been argued that large firms are subjected to more scrutiny by investors and financial analyst and therefore are less likely to engage in EM (Zhou and Elder, 2002). However Lobo and Zhou (2006) suggest that larger firms may be more inclined to manage their earnings because of the complexity of their operations which makes it difficult for users to detect misstatements.

The paper also controlled for the effect of leverage on CTA and EM. Prior research shows that firms that have a higher likelihood of violating debt agreements are more likely to have an incentive to engage in earnings management and avoid tax to increase earnings (Rusmin, 2010). On the other hand Scott (2003) asserts that management will manage earnings to mask the true firm performance in order to meet debt contract conditions and to avoid debt covenant violations. It can be implied that leverage is positively related to discretionary accruals. Leverage is estimated as long term debts over lag of total assets. Additionally, prior studies agree that firm age affects the relationship between EM and CTA, it also influences the impact IFRS has on EM and CTA. Age measures the number of years the firm has been in existence and is used as a proxy for experience.

Estimating Strategy

In order to achieve the overall objective of this research, a regression approach, which is the framework for testing the relationship among IFRS, tax avoidance and earnings management, is developed. We first analyse the relationship between earnings management and corporate tax avoidance, then examine the relationship between earnings management and International Financial Reporting Standards, and then further estimate the relationship between Corporate Tax Avoidance and IFRS. The overall impact of IFRS on the relationship between EM and CTA is finally estimated as follows:

$$CTA_{it} = \alpha_1 CTA_{it_{-1}} + \alpha_2 IFRS_{it} + \alpha_3 CSR_{it} + \alpha_4 \left(Size_{it} * EM_{it}\right) + \sum_{j=3}^{k} \alpha_j X_{ij} + \varepsilon_{it} \quad (3)$$

$$EM_{it} = \alpha_1 EM_{it_{-1}} + \alpha_2 IFRS_{it} + \alpha_3 CSR_{it} + \alpha_4 \left(Size_{it} * CTA_{it}\right) + \sum_{j=3}^{k} \alpha_j X_{ij} + \varepsilon_{it} \quad (4)$$

$$\varepsilon_{it} = \mu_i + \nu_{it}$$
$$E[\mu_i] = E[\nu_{it}] = E[\mu_i \nu_{it}] = 0$$

Where CTAit, is the level of tax avoidance and earnings management of a firm i in period t, and CTAit-1, is the observation on the same firm i in the previous year. EMit is the earnings management of a firm i in period t, and EMit-1, is the observation on the same firm i in the previous year. $IFRS_{it}$ is the adoption of international financial reporting standards of firm i in period t CSR_{it} is the corporate social responsibility of firm i in period t. $\left(Size_{it} * EM_{it}\right)$ is the interaction between the firm's size and earnings management practices of firm i in period t, $\left(Size_{it} * CTA_{it}\right)$ is the interaction between the firm's size and the tax avoidance of firm i in period t, the variable $X_{i,j}$ are a set of $\{k\}$ variables controlling for firm-specific characteristics. $\alpha's$ are the parameter vectors and ε_{it} is the unobserved time-invariant. Here the disturbance term ε_{it} has two components: the μ_i is an unobserved time-invariant firm-specific effect, and ν_{it} is the disturbance term.

One immediate problem in applying Ordinary Least Squares (OLS) in estimating equation (3) and (4) is that CTAit-1 and EMit-1, are correlated with fixed effects in the error term which gives rise to what is termed 'dynamic panel bias'. Moreover, there is evidence to suggest that OLS produces biases when an attempt is made to control for unobserved heterogeneity and simultaneity. Also, the influences on a firm's tax avoidance and earnings management strategies could cause it to adjust its CSR strategy. Therefore, the estimation strategy used to deal with possible endogeneity issues in equation (3) and (4) are based on the methodology proposed by Blundell and Bond (1998) and Alvarez and Arellano (2003) in estimating

systems of equations in both first difference and levels. As pointed in Roodman (2009), the system GMM estimator combines the standard set equations in first-difference with a suitable lagged level as instruments, and an additional set of equations in levels with suitably lagged first differences as instruments. Generally, linear difference and system GMM estimators have one–and–two step variants. Two-step System GMM, (Windmeijer, 2005) corrects standard error, small-sample adjustments, and orthogonal deviation are employed. The two-step variant uses residuals from the one-step estimates and is asymptotically more efficient than the one-step.

EMPIRICAL RESULTS

Descriptive Statistics

Table 1 depicts the summary statistics of variables of interest to the paper. The table shows that IFRS has a mean of 0.543824 and a standard deviation of 0.49863. IFRS is a dummy variable with values of 1 indicating application and 0 if otherwise. The results indicate that majority of the firms under consideration employ IFRS in their financial reporting. Corporate tax avoidance has an overall mean of -0.04134 with maximum of 7.51770 and a minimum value of -22.37134. The result points to a general involvement in tax avoidance activities by sampled firms. The negative values for the overall mean and minimum values however indicate that although there is an indication of tax avoidance, sampled firms do not aggressively engage in it. EM registered an overall mean of -0.59321 with minimum and maximum values of -144.87550 and 4.93108 respectively. This also denotes an involvement in EM activities within sampled firms. Similar to tax avoidance, however, not every firm aggressively engages in the practice of managing earnings. A high standard deviation of 10.64815 is observed indicating great variations among firms with respect to their EM behaviours. These results therefore suggest that some firm specific characteristics play important role in managerial decisions to engage in earnings manipulative behaviour.

On the control variables, the big 4 auditors' shows an overall mean of 0.33191 with maximum and minimum values of 1.0000 and 0.0000 respectively. This is a dummy variable with values of 1 indicating use of big 4 audit firms and zero if otherwise. The results imply that quite a number of them employ the services of the big 4 audit firms but a majority of them employ the services of auditors other than the big 4. Firm size has an overall mean of 17.03 million cedis with a standard deviation 2.20 million cedis. The maximum and minimum values are 25.57 million cedis and 11.31 million cedis respectively. This indicates that sampled firms were mostly large firms. The paper controls for asset tangibility which registered an overall mean of 0.27024, standard deviation of 0.25271 with 0.0000 and 1.64710 as maximum and minimum values respectively. Additionally, firm age registers an overall mean of 23 years with maximum and minimum values of 67 years and 2 years respectively. The high standard deviation depicts a high disparity of the age distribution of sampled firms. Some firms were as old as 67 years and as new as 2 years. With respect to the sources of firm's financing, the descriptive indicates that on the average, sampled firms employ equity of about GHS 62.8 million to finance their business with the highest amount of equity being GHS 63.7 million and a minimum of -GHS6.11 million. Similar to the leverage, sampled firms are either aggressively using more equity and less leverage or utilising leverage aggressively and little or no equity. Leverage on the other hand has an overall mean of 0.17202 with maximum value of 4.08841 and 0.000 minimum value. Leverage is scaled down by total assets hence the high maximum result indicate that some of the firms are highly geared whiles the low minimum value indicates that some firms on the other hand do not use leverage as a source of capital financing. Where the funding is broken down to short term and long term, the results indicate that sampled firms employ more short term funding than long-term. This is evidenced by the record of an overall mean of 0.53361 and 0. 17262 for short term and long term respectively. CSR on the other hand has an overall mean of 0.47146 and an overall variation of 0.49971. The variable also has an overall maximum value of 1.00000 with no registered minimum values. These results present evidence of the existence of CSR activities among sampled firms over the sampled period. (See Table 1 in Appendix)

Table 2 presents pair-wise correlation coefficient as a preliminary analysis of the relationship between IFRS, tax avoidance and earnings management. The result shows a negative relationship between EM and

tax avoidance. The relationship is however insignificant. The negative relations is contrary to prior findings which indicate a positive and complementary relationship between the two (Desai and Dharmapala, 2009). IFRS also registered a negative insignificant relationship with tax avoidance and a negative insignificant relationship with EM. The negative relationship between IFRS and EM shows that IFRS improves the quality of financial reporting and this is similar to prior findings Houqe et al. (2012) who found evidence that mandatory IFRS adoption improves earnings quality but contrary to (Kao and Wei, 2014) findings who did not find any significant improvement in reporting quality after the adoption of IFRS. The negative relationship between IFRS and CTA can been explained from CTA's relationship with EM. As IFRS pushes managers to improve reporting quality, there is less incentive for them to engage in avoidance activities. Hence IFRS can be associated with reduced CTA activities. (See Table 2 in Appendix)

Evaluation of Firm Tax Avoidance and Earnings Management

This section analyses how IFRS influences the relationship between tax avoidance and earnings management, and the funding strategies of sampled firms in Ghana. Table 3 presents the regression result that has corporate tax avoidance (CTA) and earnings management (EM) as the dependent variables. The different columns relate to different empirical approaches to funding sources (debt and equity) as well as the other explanatory variables. Column 1 and 2 assess the relationship between IFRS and CTA while column 3 and 4 assess the relationship between IFRS and EM. On the relationship between IFRS and CTA, the results indicate that IFRS has a negative relationship with CTA. However the relationship is statistically insignificant. The negative relationship indicates that firms that apply IFRS in the preparation of their financial reports engage less in corporate tax avoidance activities. Similarly, a negative but statistically significant relationship is found between IFRS and EM. This also implies that firms that apply IFRS in their financial reporting engage less in earnings manipulative activities resulting in an overall improvement in reporting quality. This relationship confirms prior studies that find evidence of a negative relationship between EM and IFRS which confirms the improvement in reporting quality after the adoption/adaption of IFRS (Houqe et al., 2012; Sellami and Fakhfakh, 2014; and Barth et al. 2006). The negative relationship between IFRS and EM explains the negative relationship between IFRS and CTA. Prior studies argue that tax avoidance is value enhancing to shareholders but due to conflict of interest the exists between managers and shareholders, as explained by the agency theory, managers will not engage in avoidance unless it will yield them some private gains hence managers responsible for taking avoidance decisions take decisions that reflect their private interest. Tax avoidance is secretive in nature and requires manipulation of transactions to guarantee some tax benefits while shielding it from tax authorities (Desai and Dharmapala, 2009; 2006). This leaves loopholes which can be exploited by managers manage earnings in ways that provide benefits to them and not necessarily to shareholders. Literature have linked avoidance with earnings management (EM) by arguing that tax avoidance demands scheming actions that can be bundled with diversionary activities, including earnings manipulation to advance the interests of managers rather than shareholders (Desai and Dharmapala, 2009;2006; Desai et al., 2007; Desai and Dharmapala, 2005; Desai, 2005). Hence a positive relationship exists between CTA and EM as depicted in the succeeding section (see table 6). This positive relationship confirms that CTA increases manipulative behaviour of managers as CTA which is permitted by shareholders because it is value enhancing to them serves as a shield to self-seeking manipulative managers. With the adoption/adaption of IFRS, managerial incentive to manipulate earnings reduces and therefore improves on the quality of financial reporting. This improvement in reporting provides less motivation for managers to engage in tax avoidance as it affords less or no shield, hence managers engage less in tax avoidance activities explaining the negative relationship between IFRS and CTA.

Leverage is found to have a positive relationship with CTA. This implies that highly geared firms engage more in tax avoidance. This can be explained by the finance theory which indicates that debt financing provides firms with tax savings as interest on debts are tax-deductible. Hence higher debts financing results in greater tax-savings. Similarly, equity has a positive relationship with CTA. This goes to confirm the intuition that shareholders view avoidance as value enhancing and encourage managers to

engage in it. It can also be observed that the negative relationship between IFRS and CTA is maintained when leverage which is a control in the first column is removed and equity variable introduced in the second column. However the insignificance of the negative relationship reduces with the introduction of equity. This may imply that the relationship between IFRS and CTA remains negative irrespective of capital structure thus the capital plays little role when it comes to the relationship between IFRS and CTA. This also suggests that as both equity and debt financing results in more tax avoidance activities, when the adoption of IFRS reduces EM and therefore reduces managerial incentives to engage in CTA, CTA is reduced irrespective of the capital structure. The result also indicates a significant negative relationship between CTA of the previous year and CTA of the current year which implies that when firms are aggressively avoiding taxes in a current year, they are less likely to avoid more taxes in the subsequent year, especially when firms' assets are financed by debt.

The regression output for the relationship between IFRS and EM is displayed in columns 3 and 4 in table 3. The results indicate a significantly negative relationship between IFRS and EM. The negative relationship is significant at 5%. This result implies that adoption/adaption and application of IFRS in financial reporting can be associated with reduced earnings manipulations resulting in improved reporting quality. This relationship can be explained by the agency theory which indicates that management have incentives to pursue self-seeking objectives to the detriment of shareholders. Such opportunistic manager's resort to the abuse of flexibility in accounting principles to influence reported earnings thereby causing reported income to be larger or smaller than it would otherwise be to better reflect their individual incentives. Thus to remove allowable accounting alternatives and ensure accounting measurements that better reflect a firm's economic performance (Barth et al., 2006), the IASB developed IFRS which is believed to be an internationally acceptable set of high quality reporting standards. Thus the adoption/adaption of the standard is expected to improve reporting quality as confirmed by some studies (Houqe et al., 2012; Sellami and Fakhfakh, 2014; Barth et al. 2006). Leverage has an insignificant negative relationship with EM. The relationship implies that highly leveraged firms engage less in EM. This can be interpreted from the perspective of researchers who believe that highly geared firms are subjected to more scrutiny by investors and financial analyst and therefore are less likely to engage in EM (Zhou and Elder, 2002). The insignificance of the relationship may also imply that leverage firms may engage in EM when they have other incentives such a likelihood of violating debt agreements (Rusmin, 2010). From the current paper, the negative relationship can be explained by the presence of IFRS which gives less room for managers to engage in EM activities. Equity on the other hand has a positive relationship with EM which is quite unexpected. The negative relationship between IFRS and EM is also maintained when leverage is replaced with equity as was the case in columns 1 and 2.The relationship however turns significant at 1%. This may imply that the relationship between IFRS and EM remains positive irrespective of capital structure thus the capital plays little role when it comes to the relationship between IFRS and EM. The result also indicate a positive relationship between EM of previous year and EM of the current year. Curiously the relationship turns negative in column 4. This implies that the success of the manipulative activities of previous years have a positive impact on the manipulative behaviour of management in the current period. However, when leverage is replaced with equity, which indicates that in the situation of equity financing, firms are less likely to engage in EM in current and subsequent periods if they engaged in it in the preceding period. Firm size was also found to have a negative relationship with EM and also CTA. This relationship becomes significant in column 4 with equity as a financing source. The negative relationship implies that bigger firms are less likely to engage in EM and therefore CTA. This is consistent with prior findings that large firms are less likely to engage in earnings management due to more scrutiny by investors and financial analyst (Zhou and Elder, 2002) but inconsistent with other findings such as the findings of Lobo and Zhou (2006) which suggest that larger firms may be more inclined to manage their earnings because of the complexity of their operations which makes it difficult for users to detect misstatements. The same negative relationship is found between Asset tangibility and EM and CTA and also between Age and EM and CTA. The explanation flows from the interpretation for size. Firms with large assets as well as older firms have less incentives to engage in EM and therefore find CTA activities to be less attractive. (See Table 3 in Appendix)

Table 4 explores the relationships between IFRS and CTA and IFRS and EM taking into consideration the listing status of the firm. Table 4 is made up of 3 columns. In columns 1 and 2, CTA is the dependent variable while columns 3 have EM as the dependent variable. When the sample was separated into listed and non-listed firms, the result on the relationship between IFRS and CTA remains a negative relationship for non-listed firms but becomes positive for listed firms. Similar result is seen for IFRS and EM as the relationship becomes positive for listed firms. This implies that IFRS has little or no reduction impact on EM for listed firms. Due to complementary relationship between EM and CTA, IFRS similarly does not reduce CTA. This goes to confirm the findings by Capkun et al. (2013) and Jeanjean and Stolowy (2008) whose studies found evidence that the quality of accounting information did not improve with the introduction of IFRS. These studies also employed listed firms as sample. The result may therefore imply that improving accounting information quality goes beyond adoption/adaption of IFRS as suggested by Barth et al. (2006) especially for listed firms. Hence although, IFRS improved reporting quality generally for non-listed sampled firms, same cannot be said for listed firms suggesting that the ability of IFRS to improve on reporting quality depends on the listing status of the firm. Leverage becomes positively related to CTA for both listed and un-listed firms and negatively related to EM for listed firms. Implying that non-listed firms who are more likely to resort to debt financing engage more in avoidance activities, it can however be explained that debt financing gives leverage users some tax savings because interest on debts is tax-deductible. For listed firms, the relationship between leverage and EM remained negative. Equity maintained a positive relationship with CTA for listed firms but was negative for non-listed firms. Equity ratio also registered a negative relationship with EM for listed firms. This goes to indicate that equity holders do not encourage EM and react negatively to managerial opportunistic behaviours. (See Table 4 in Appendix)

Sensitivity of Tax Avoidance and EM to Funding Sources

Table 5 displays the sensitivity analyses of CTA, EM and funding sources. In columns 1 and 2, where tax avoidance serves as the dependent variable, it is found that EM has a positive relationship with CTA. The positive relationship between CTA and EM imply that increased manipulative activities results in more avoidance activities and vice versa. This is consistent with the link between EM and CTA as revealed by prior researchers such as Desai and Dharmapala, (2009; 2007; 2005). They argue that avoidance and manipulative techniques are complementary and are bundled together such that increases in one activity results in increases in another. This relationship can be explained by the agency theory which also asserts that individuals are self-interested people who seek to maximise their interest at any point. This means that managers will seek their self-interest at the expense of shareholders resulting in conflict of interest between managers and shareholders. The conflict of interest can lead managers into taking such corporate tax decisions that reflect their private interests (Scholtens and Kang, 2013; and Prior et al., 2008). However the relationship turns negative when leverage is replaced with equity in column 2. Similar, where EM is dependent variable, CTA has a negative relationship with EM but the relationship turns positive when leverage is replaced with equity. This result suggest that the incentive to manage earnings and use CTA as cover up is higher for highly leveraged firms. This is because leverage affords a means for saving on taxes.

The relationship between CTA and EM remains positive whiles that between IFRS and CTA remains negative with the introduction of the interaction term between firm size and leverage. When interaction between firm size and equity is introduced into column 2 and with equity financing, the relationship between EM and CTA changes from positive to negative whiles the negative relationship with IFRS is maintained. Firm size has a negative relationship with tax avoidance. This implies that bigger firms are less likely to engage in avoidance activities. Since bigger firms engage less in avoidance activities, then it may stand to reason that any attempt to manage earnings will be done through other means other than through engaging in more avoidance activities. The relationship between leverage and CTA however changes to negative. This relationship also indicates that less leverage firms will have little tax savings but do resort to other mechanisms to increase their tax savings. The interaction between leverage and size has a positive relationship with CTA. This can be interpreted that bigger firms that engage in avoidance

activities resort to any means of tax savings other than through debt financing. On the other hand, the interaction between firm size and equity has a negative relationship with CTA. This suggests that bigger firms with equity funding engage less in tax avoidance activities and less sensitive to change in the level of equity.

In columns 3 and 4, it can be observed that the relationship between CTA and EM is negative under column 3 and negative between IFRS and EM. When the interaction between firm size and equity is introduced into column 4 and with equity financing, the relationship between CTA and EM changes from negative to positive whiles the negative relationship with IFRS is maintained but becomes significant. Firm size has a positive relationship with EM. This implies that bigger firms more likely to engage in earnings manipulative activities. However since bigger firms engage less in avoidance activities, then it may stand to reason that any attempt to manage earnings will be done through other means other than through engaging in more avoidance activities. The relationship between leverage and EM is positive. This relationship also indicates that highly leveraged firms engage more in EM. The interaction between leverage and size has a negative relationship with EM. This implies that bigger firms that are highly leveraged engage less in EM. This confirms the findings that argue that large firms are less likely to engage in earnings management due to more scrutiny by investors and financial analyst (Zhou and Elder, 2002). On the other hand, the interaction between firm size and equity has a positive relationship with EM. This suggests that bigger firms with equity funding engage more in earnings manipulative activities. (See Table 5 in Appendix)

Sensitivity of Tax Avoidance and EM to Firm Size

Table 6 explores the overall sensitivity of the relationship between CTA and EM to firm size. The relationship between EM and CTA is positive and remains positive with the introduction of the interaction between EM and firm size. The interaction between EM and size has a negative influence on CTA. This implies bigger firms who engage in earnings manipulations seek to achieve that end without necessarily engaging in tax avoidance mechanisms and they are less sensitive to the level of earnings manipulations. When leverage is removed and equity capital is introduced under column 2, the positive relationship between CTA and EM becomes significant. Also the negative relationship between CTA and IFRS is maintained. This implies that a big firm's decision to engage in avoidance behaviour or otherwise is not influenced much by the capital structure. The relationship between CTA and EM remains positive under columns 3 and 4 even with introduction of the interaction between CTA and firm size. The interaction between CTA and size has a negative influence on EM. This implies bigger firms who engage in tax avoidance mechanisms are not necessarily doing so through earnings manipulation. When leverage is removed and equity capital is introduced under column 4, the positive relationship between CTA and EM is maintained. Also the negative relationship between CTA and IFRS is maintained. This implies that a big firm's decision to EM or otherwise is not influenced much by the capital structure. Also the influence of IFRS on reporting quality remains positive irrespective of capital structure suggesting that capital structure plays minimal role in the ability of IFRS to improve reporting quality. (See Table 6 in Appendix)

CONCLUSION

The paper investigates the implications of adoption of international financial reporting standards (IFRS) for accounting information quality and tax avoidance. The paper draws its sample of 119 from non-financial firms listed on the Ghana Stock Exchange (GSE) as well as non-listed firms from Ghana Revenue Authority (GRA) database. We employ system methods of moments (GMM) to establish whether adoption of IFRS of firms in Ghana reduces the incidence of earnings management and tax avoidance. The results show the existence and growth of earnings management among sampled firms. This indicates that sampled firms use flexibility in financial accounting to influence reported earnings. The existence of tax avoidance among sampled implies that some private benefit exists for managers engaging in such avoidance activities. There is also evidence which suggests that majority of firms in

Ghana employ IFRS in their financial reporting. On the relationship between IFRS and CTA, the results indicate that firms that apply IFRS in the preparation of their financial reports engage less in corporate tax avoidance activities. The result also shows a statistically significant negative relationship between IFRS and EM indicating that, firms that apply IFRS in their financial reporting engage less in earnings manipulative activities. These results suggest that the adoption/adaption of IFRS among sampled firms improves their reporting quality and reduces their individual incentives to engage in avoidance activities. With the adoption/adaption of IFRS, managerial incentive to manipulate earnings reduces and therefore improves on the quality of financial reporting. This improvement in reporting provides less motivation for managers to engage in tax avoidance as it affords less or no shield, hence managers engage less in tax avoidance activities explaining the negative relationship between IFRS and CTA.

The paper also reveals that highly geared firms engage more in tax avoidance and so do firms financed through equity. This implies that both equity and debt financing results in more tax avoidance activities. When the adoption of IFRS reduces EM and therefore reduces managerial incentives to engage in CTA, CTA is reduced irrespective of the capital structure. The result suggests that the financing structure of a firm plays little role in the firm's incentives to engage in avoidance activities among the sampled firms. Firm size was also found to have a negative relationship with EM and also with CTA. The negative relationship implies that bigger firms are less likely to engage in EM and therefore CTA. This may be explained by the fact that bigger firms are more subjected to regulatory/investor scrutiny. When the sample was separated into listed and non-listed firms, the result on the relationship between IFRS and CTA remains a negative relationship for non-listed firms but becomes positive for listed firms. Similar result is seen for IFRS and EM as the relationship becomes positive for listed firms. This implies that IFRS has little or no reduction impact on EM for listed firms but does for non-listed firms. Hence although, IFRS improved reporting quality generally for non-listed sampled firms, same cannot be said for listed firms suggesting that the ability of IFRS to improve on reporting quality depends on the listing status of the firm. Leverage becomes positively related to CTA for both listed and non-listed firms and negatively related to EM for listed firms. This implies that non-listed firms who are more likely to resort to debt financing engage more in avoidance activities. For listed firms, the relationship between leverage and EM remained negative.

The results further suggest that increased manipulative activities will lead to more avoidance activities. Our results also reveal that firm size has a positive relationship with EM. This implies that bigger firms are more likely to engage in earnings manipulative activities. However since bigger firms engage less in avoidance activities, then it may stand to reason that any attempt to manage earnings will be done through other means other than through engaging in more avoidance activities.

These results give rise to two public policy implications: First, it adds to prior literature by assessing the implications of IFRS on the relationship between EM and tax avoidance. Second, the paper brings to bear the impact of the adoption of IFRS on reporting quality from an emerging economy's perspective and also assesses whether the adoption has any influence on the relationship between EM and tax avoidance. This paper is timely for a developing country and for that matter Ghana as the adoption of IFRS in 2007 provides policy guideline directions on the effectiveness of IFRS in improving the quality of accounting in the country. This also provides information to international accounting standard setters on how effectively the standards they set meet the objective of improved reporting quality.

ENDNOTE

1. This is because prior research argue that both negative and positive DAC_{it} can be used to conceal poor performance or save current earnings for future use (Rusmin, 2010; Gul et al., 2003; DeFond and Park, 1997).

REFERENCE

Alvarez, J., & Arellano, M. (2003). The time series and cross-section asymptotics of dynamic panel data estimators. Econometrica, 1121-1159.

Armstrong, C. S., Blouin, J. L., & Larcker, D. F. (2012). The incentives for tax planning. Journal of Accounting and Economics, 53(1), 391-411.

Ball, R. (2006). International Financial Reporting Standards (IFRS): pros and cons for investors. Accounting and business research, 36(sup1), 5-27.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? Journal of Financial Economics, 95(1), 41-61.

Barth, M. E., Landsman, W., Lang, M., & Williams, C. (2006). Accounting quality: International accounting standards and US GAAP. Manuscript, Stanford University.

Beatty, A., Ke, B. and Petroni, K. R. (2002). Earnings Management to Avoid Declines Across Publicly and Privately Held Banks. The Accounting Review 77, 547-570.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. Journal of econometrics, 87(1), 115-143.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. Academy of management Review, 32(3), 946-967.

Capkun, V., Collins, D. W., & Jeanjean, T. (2013). The effect of IAS/IFRS adoption on earnings management (smoothing): a closer look at competing explanations. IFRS Adoption on Earnings Management (Smoothing): A Closer Look at Competing Explanations (July 3, 2013).

Cai, H., & Liu, Q. (2009). Competition and Corporate Tax Avoidance: Evidence from Chinese Industrial Firms. The Economic Journal, 119(537), 764-795.

Christensen S. and Murphy R. (2004) ‘’The Social Irresponsibility of Corporate CTA: Taking CSR to the bottom line’’, Society for International Development 1011-6370/04.

Chua, Y. L., Cheong, C. S., & Gould, G. (2012). The impact of mandatory IFRS adoption on accounting quality: Evidence from Australia. Journal of International Accounting Research, 11(1), 119-146.

Crutchley, C. E., & Hansen, R. S. (1989). A test of the agency theory of managerial ownership, corporate leverage, and corporate dividends. Financial Management, 36-46.

Davidson, W. N., Jiraporn, P., Kim, Y. S., & Nemec, C. (2004). Earnings management following duality-creating successions: Ethnostatistics, impression management, and agency theory. Academy of management journal,47(2), 267-275.

Dechow, P., Sloan, R., and Sweeney, A. (1995). Detecting earnings management. The Accounting Review 70 (2), 193-225.

Desai, M. A. (2005). The degradation of reported corporate profits. The Journal of Economic Perspectives, 19(4), 171-192.

Desai, M. A., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. Journal of Financial Economics, 79(1), 145-179.

Desai, M. A., & Dharmapala, D. (2006). Earnings management and corporate tax shelters. Harvard University and University of Connecticut working paper.

Desai, M. A., & Dharmapala, D. (2008). Tax and corporate governance: an economic approach. In Tax and corporate governance (pp. 13-30). Springer Berlin Heidelberg.

Desai, M. A., Dyck, A., & Zingales, L. (2007). Theft and taxes. Journal of Financial Economics, 84(3), 591-623.

Desai, M., & Dharmapala, D. (2005). Corporate tax avoidance and firm value. In American Law & Economics Association Annual Meetings (p. 27). bepress.

Desai, M., Dharmapala, D., (2009) “Corporate CTA and firm value”, Review of Economics and Statistics 91, 537–546

Dhaliwal, D. S., Gleason, C. A., & Mills, L. F. (2004). Last-Chance Earnings Management: Using the Tax Expense to Meet Analysts' Forecasts. Contemporary Accounting Research, 21(2), 431-459.

Donaldson, L., and Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. Australian Journal of management, 16(1), 49-64.
Dye, R. A. (1988). Earnings management in an overlapping generations model. Journal of Accounting research, 195-235.
Eisenhardt, K. M. (1989). Agency theory: An assessment and review. Academy of management review, 14(1), 57-74.
Fernandes, N. G., and Ferreira, M. A. (2007). The evolution of earnings management and firm valuation: a cross-country analysis. EFA Ljubljana Meetings Paper (pp. 1-39).
Frank, M. M., Lynch, L. J., and Rego, S. O. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. The Accounting Review, 84(2), 467-496.
Friebel, G., & Guriev, S. (2005). Attaching workers through in-kind payments: Theory and evidence from Russia. The World Bank Economic Review, 19(2), 175-202.
Gupta, S., & Newberry, K. (1997). Determinants of the variability in corporate effective tax rates: Evidence from longitudinal data. Journal of Accounting and Public Policy, 16(1), 1-34.
Hanlon, M. (2003). What can we infer about a firm's taxable income from its financial statements? National Tax Journal 56 (4), 831–863.
Hanlon, M., & Heitzman, S. (2010). A review of tax research. Journal of Accounting and Economics, 50(2), 127-178
Hanlon, M., and Slemrod, J. (2007). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax aggressiveness. Evidence from Stock Price Reactions to News About Tax Aggressiveness (January 23, 2007).
Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. Accounting Horizons, 13(4), 365-383.
Houqe, M.N., , Zijl, T, Dunstan, K. and Waresul Karim, A. K. M.(2012) 'The effect of IFRS adoption and investor protection on earnings quality around the world', The International Journal of Accounting 47, 333–355
Hunt, A., Moyer, S., and Shevlin, T. (2000). Earnings volatility, earnings management, and equity value. http://faculty.washington.edu/shevlin/hms2vol
Inger, K.K. (2013) Relative Valuation of Alternative Methods of Tax Avoidance, The Journal of the American Taxation Association 36 (1) 27-55
Jeanjean, T., & Stolowy, H. (2008). Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption. Journal of accounting and public policy, 27(6), 480-494.
Jensen, M. (2005). Agency costs of overvalued equity. Financial Management, Spring, 5-19.
Jones, J. (1991), "Earnings management during import relief investigations", Journal of Accounting Research 29, 193-228.
Jerzemowska, M. (2006). The Main Agency Problems and Their Consequences. Acta Oeconomica Pragensia, 2006(3), 9-17.
Kao, H. S., & Wei, T. H. (2014). The Effect of IFRS, Information Asymmetry and Corporate Governance on the Quality of Accounting Information. Asian Economic and Financial Review, 4(2), 226-256.
Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. Journal of Financial Economics, 69(3), 505-527.
Levitt, A. (1998). The numbers game. The CPA Journal, 68(12), 14-19.
Lobo, G. J., & Zhou, J. (2006). Did conservatism in financial reporting increase after the Sarbanes-Oxley Act? Initial evidence. Accounting Horizons, 20(1), 57-73.
Marra, A., Mazzola, P., & Prencipe, A. (2011). Board monitoring and earnings management pre-and post-IFRS. The International Journal of Accounting, 46(2), 205-230.
McNichols, M. F. (2001). Research design issues in earnings management studies. Journal of accounting and public policy, 19(4), 313-345.
Meeks, G., & Swann, G. P. (2009). Accounting standards and the economics of standards. Accounting and Business Research, 39(3), 191-210.

Noor, R. M., & Fadzillah, N. S. M. (2010). Corporate tax planning: a study on corporate effective tax rates of Malaysian listed companies. International Journal of Trade, Economics and Finance, 1(2), 189.
Paglietti, P. (2009). Investigating the effects of the EU mandatory adoption of IFRS on accounting quality: Evidence from Italy. International Journal of Business and Management, 4(12), p3.
Phillips, J. D., Pincus, M., Rego, S. O., and Wan, H. (2004). Decomposing changes in deferred tax assets and liabilities to isolate earnings management activities. Journal of the American Taxation Association, 26(s-1), 43-66.
Prior, D., Surroca, J., and Tribó, J. A. (2008). Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. Corporate Governance: An International Review, 16(3), 160-177.
Rodriques, L.L., Schmidt, P., Santos, J.L (2012) The origins of modern accounting in Brazil: Influences leading to the adoption of IFRS, Research in Accounting Regulation 24 (1), 15-24
Rohaya, M. N., Nor'Azam, M., and Barjoyai, B. (2008). Corporate effective tax rates: a study on Malaysian public listed companies. Malaysian Accounting Review, 7(1), 1-20.
Roodman, D. 2009. Estimating fully observed recursive mixed-process models with cmp. Working Paper 168. Center for Global Development. Washington, DC
Rusmin, R. (2010). Auditor quality and earnings management: Singaporean evidence. Managerial Auditing Journal, 25(7), 618-638.
Sellami, M., & Fakhfakh, H. (2013). Effect of the mandatory adoption of IFRS on real and accruals-based earnings management: Empirical evidence from France. International Journal of Accounting and Economics Studies, 2(1), 22-33.
Soderstrom, N. S., & Sun, K. J. (2007). IFRS adoption and accounting quality: a review. European Accounting Review, 16(4), 675-702.
Schipper, K. (1989)," Commentary on earnings management", Accounting Horizons 3 (4):91–102
Stroh, L. K., Brett, J. M., Baumann, J. P., and Reilly, A. H. (1996). Agency theory and variable pay compensation strategies. Academy of Management Journal,39(3), 751-767.
Scott, W.R. (2003). Financial Accounting theory. Pearson Education Canada Inc. Toronto, Ontario, 3rd edition.
Scholtens, B. and Kang, F. C. (2013). Corporate social responsibility and earnings management: Evidence from Asian economies. Corporate Social Responsibility and Environmental Management, 20(2), 95-112.
Sun, L and Rath, S. (2010). Earnings management Research: A review of contemporary research methods. Global Review of accounting and Finance, 1(1), pp. 121-135.
Windmeijer, F., 2005. A finite sample correction for the variance of linear efficient two-step GMM estimators. J. Econometrics 126 (1), 25–51.
Zhou, J., and Elder, R. (2002). Audit firm size, industry specialization and earnings management by initial public offering firms. SUNY at Binghamton working paper.

APPENDIX

TABLE 1
SUMMARY STATISTICS ON SELECTED BANK LEVEL VARIABLES

Table 1 presents summary statistics of selected firm specific variables. IFRS connotes the adoption of international financial reporting standards. Effective tax rate (ETR) is employed as the measure of corporate tax avoidance. Discretionary accrual is used as the proxy for earnings management. Big4 Auditors is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. Leverage is total debt scaled by total assets. Size is a control variable measured as the natural logarithm of total assets. Asset tangibility measures the physical property of the firm. Age measures the number of years the firm has been in existence and is used as a proxy for experience. Short-term fund is short-term debt scaled by total assets. Long-term fund is long-term debt scaled by total assets. Equity capital is used as a proxy to measure the degree of capitalization. CSR represents corporate social responsibility engagement of the firm. The mean values of the selected firms are in percentage terms except for firm size and equity capital, which are in millions of Ghana cedis.

	Obs	Mean	Std. Dev.	Minimum	Maximum
IFRS	471	0.543824	0.49863	0	1
Tax avoidance	404	(0.04134)	1.51411	(22.37134)	7.51770
Earnings mgt	186	(0.59321)	10.64815	(144.87550)	4.93108
Big 4 Auditors	467	0.33191	0.47140	0	1.00000
Leverage	414	0.17202	0.34024	0	4.08841
Size (GH¢')	414	17.03993	2.20223	11.31510	25.57337
Assets tangibility	411	0.27024	0.25271	0.00000	1.64710
Age (years)	284	23.75	14.59	2.00	67.00
Short-term fund	72	0.53361	0.52307	0.01329	4.08841
Long-term fund	190	0.17262	0.21787	0.00013	1.40394
Equity capital (GH¢')	394	62.80	43.90	(6.10)	63.70
CSR	473	0.47146	0.49971	0	1.00000

Source: GSE and GRA and author's own calculation

TABLE 2
PAIR-WISE CORRELATION COEFFICIENT BETWEEN KEY SELECTED VARIABLES

The table 2 presents pair-wise correlation coefficients estimated on sample of firms from Ghana. * implies significant at 5% or more. Effective tax rate (ETR) is employed as the measure of *corporate tax avoidance*. Discretionary accrual is used as the proxy for *earnings management. Big4 Auditors* is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. *Leverage* is total debt scaled by total assets. *Size* is a control variable measured as the natural logarithm of total assets. *Asset tangibility* measures the physical property of the firm. *Age* measures the number of years the firm has been in existence and is used as a proxy for experience. *Short-term fund* is short-term debt scaled by total assets. *Long-term fund* is long-term debt scaled by total assets. E*quity capital* is used as a proxy to measure the degree of capitalization. CSR represents corporate social responsibility engagement of the firm. IFRS connotes the adoption of international financial reporting standards.

	Tax avoidance	Earnings mgt	Big 4 Auditors	Leverage	Size	Assets tangibility	Age	Short-term funds	Long-term fund	Equity capital	CSR	IFRS
Tax avoidance	1											
Earnings mgt	-0.0007	1										
Big 4 Auditors	-0.068	-0.1085	1									
Leverage	0.0288	-0.1126	0.2394*	1								
Size	-0.0411	-0.0606	0.1964*	0.0384	1							
Assets tangibility	-0.0026	0.0092	0.2535*	0.1539*	0.2484*	1						
Age	0.0629	-0.0008	-0.1321*	-0.0583	0.1044	-0.1247*	1					
Short-term fund	0.0704	-0.0387	-0.2187	0.9787*	-0.3196*	-0.2441*	0.1663	1				
Long-term fund	0.1996*	0.0698	-0.1984*	0.4558*	-0.0295	-0.1069	0.4767*	-0.1837	1			
Equity capital	0.0122	0.0158	-0.0958	-0.0203	0.4827*	0.1460*	0.1515*	-0.3343*	-0.0324	1		
CSR	-0.0651	-0.0826	0.1581*	-0.1446*	0.0449	-0.0272	0.1058	-0.1015	-0.0578	-0.1169*	1	
IFRS	-0.0631	-0.070	0.1817*	0.2183*	0.0503	0.028	-0.16*	0.1014	-0.212*	-0.132*	0.0967*	1

Source: GSE and GRA and authors' own calculation

TABLE 3
DETERMINANTS OF TAX AVOIDANCE AND EARNINGS MANAGEMENT

The dependent variables are tax avoidance and earnings management. *IFRS* connotes the adoption of international financial reporting standards. *CSR* represents corporate social responsibility engagement of the firm. *Big4 Auditors* is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. *Leverage* is long-term debt scaled by total assets. E*quity capital* is used as a proxy to measure the degree of capitalization. *Size* is a control variable measured as the natural logarithm of total assets. *Asset tangibility* measures the physical property of the firm. *Age* measures the number of years the firm has been in existence and is used as a proxy for experience. All regressions are estimated using dynamic panel-data estimation, Two-step System. Standard errors are reported in parentheses. ***, **, and * indicates statistical significance at the 1% 5% and 10% level respectively. The following diagnostic tests are reported: (1) The Sargent test for over identification restriction which the null hypothesis is that instruments are exogenous (2) The Chi^2 for joint significance of instruments (3) The Arl tests for the presence of auto correlation and (4) Observations

	Tax avoidance		**Earnings management**	
	(1)	(2)	(3)	(4)
Tax avoidance_lag	-0.417***	-0.037		
	(000)	(0.840)		
Earnings management_lag			0.00812	-0.27
			(0.977)	(0.281)
IFRS	-0.317	-0.255	-0.226*	-0.395***
	(0.491)	(0.489)	(0.034)	(000)
CSR	-0.18	-0.19	0.174**	0.161**
	(0.577)	(0.47)	(0.004)	(0.002)
Big 4 Auditors	0.0598	0.0759	-0.188**	-0.221***
	(0.85)	(0.771)	(0.001)	(000)
Leverage	0.113		-0.0689	
	(0.768)		(0.227)	
Equity capital		3.68E-10		3.75e-09***
		(0.224)		(000)
Size	-0.0824	-0.129	-0.0144	-0.0768***
	(0.362)	(0.156)	(0.348)	(000)
Assets tangibility	-0.291	-0.0491	-0.0947	-0.163
	(0.666)	(0.933)	(0.494)	(0.265)
Age	0.00698	0.00582	0.00102	0.00171
	(0.492)	(0.485)	(0.674)	(0.427)
Diagnostic test:				
Sargent test	0.357	1.331	6.516	4.437
P-value	0.986	0.856	0.164	0.35
Chi2	19.35***	4.194	60.89***	80.2***
Arl	-5.691	-2.926	-2.016	-0.293
P-value	1.26E-08	0.00343	0.0438	0.77
No. of observation	175	164	63	57

TABLE 4
DETERMINANTS OF TAX AVOIDANCE AND EARNINGS MANAGEMENT CONTROLLING FIRM STATUS

The dependent variables are tax avoidance and earnings management. IFRS connotes the adoption of international financial reporting standards. CSR represents corporate social responsibility engagement of the firm. Big4 Auditors is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. Leverage is long-term debt scaled by total assets. Equity capital is used as a proxy to measure the degree of capitalization. Size is a control variable measured as the natural logarithm of total assets Asset tangibility measures the physical property of the firm. Age measures the number of years the firm has been in existence and is used as a proxy for experience. All regressions are estimated using dynamic panel-data estimation, Two-step System. Standard errors are reported in parentheses. ***, **, and * indicates statistical significance at the 1% 5% and 10% level respectively. The following diagnostic tests are reported: (1) The Sargent test for over identification restriction which the null hypothesis is that instruments are exogenous (2) The Chi2 for joint significance of instruments (3) The Arl tests for the presence of auto correlation and (4) Observations

	Tax avoidance		**Earnings management**
	Listed	Unlisted	Listed
Tax avoidance_lag	0.131	-0.0859	
	(0.799)	(0.477)	
Earnings management_lag			-0.192
			(0.391)
IFRS	0.0001	-0.141	1.088*
	(000)	(0.585)	(0.012)
CSR	-1.155	-0.0451	0.12
	(0.053)	(0.816)	(0.188)
Big 4 Auditors	1.573	0.134	-0.12
	(0.079)	(0.56)	(0.476)
Equity capital	2.11e-08***	-4.07E-11	-0.00003
	(000)	(0.843)	(0.347)
Leverage	4.157***	0.27	-0.129
	(000)	(0.704)	(0.546)
Size	-0.338*	0.0127	-0.046
	(0.035)	(0.854)	(0.111)
Assets tangibility	-2.605	-0.019	-0.687*
	(0.059)	(0.966)	(0.029)
Age	-0.0293	0.00112	0.00496
	(0.579)	(0.872)	(0.635)
Diagnostic test			
Sargent test	0.576	10.28	5.982
P-value	0.902	0.036	0.112
Chi2	29.83***	2.179***	67.23***
Arl	-1.17	-4.226	-2.333
P-value	0.242	0.0000238	0.0196
No. of observation	45	119	26

TABLE 5
THE SENSITIVITY OF TAX AVOIDANCE AND EARNINGS MANAGEMENT TO FUNDING SOURCES

The dependent variables are tax avoidance and earnings management. IFRS connotes the adoption of international financial reporting standards. CSR represents corporate social responsibility engagement of the firm. Big4 Auditors is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. Leverage is long-term debt scaled by total assets. Equity capital is used as a proxy to measure the degree of capitalization. Size is a control variable measured as the natural logarithm of total assets Asset tangibility measures the physical property of the firm. Age measures the number of years the firm has been in existence and is used as a proxy for experience. Firm size is interacted with firm funding source (Leverage and equity). All regressions are estimated using dynamic panel-data estimation, Two-step System. Standard errors are reported in parentheses. ***, **, and * indicates statistical significance at the 1% 5% and 10% level respectively. The following diagnostic tests are reported: (1) The Sargent test for over identification restriction which the null hypothesis is that instruments are exogenous (2) The Chi2 for joint significance of instruments (3) The Arl tests for the presence of auto correlation and (4) Observations

	Tax avoidance		**Earnings management**	
	(1)	(2)	(3)	(4)
	Model 1	Model 2	Model 3	Model 4
Tax avoidance_lag	-0.480***	-0.095		
	(000)	(0.389)		
Earnings management_lag			0.123	-0.3
			(0.683)	(0.235)
Earnings management	0.000833	-0.00507		
	(0.944)	(0.378)		
Tax avoidance			-0.0195	0.136**
			(0.493)	(0.006)
IFRS	-0.565	-0.371	-0.12	-0.415***
	(0.314)	(0.18)	(0.270)	(0001)
CSR	-0.437	-0.541**	0.124	0.163**
	(0.269)	(0.005)	(0.057)	(0.001)
Leverage * size	0.253		-0.135***	
	(0.131)		(000)	
Equity * size		-1.69E-10		1.1E-09
		(0.718)		(0.232)
Big 4 Auditors	0.188	0.126	-0.251***	-0.252***
	(0.611)	(0.502)	(000)	(000)
Leverage	-3.676		1.936***	
	(0.162)		(000)	
Equity capital		4.34E-09		-1.74E-08
		(0.701)		(0.336)
Size	-0.204	-0.181**	0.0485	-0.0859***
	(0.056)	(0.005)	(0.062)	(000)
Assets tangibility	-0.742	-0.503	0.0801	-0.11
	(0.308)	(0.2)	(0.566)	(0.446)
Age	0.016	0.0126*	-0.00353	0.0019
	(0.205)	(0.045)	(0.146)	(0.383)
Sargent test	0.293	9.235	10.73	4.393
P-value	0.99	0.0555	0.0297	0.355
Chi2	31.27***	29.11***	91.13***	88.04***
Arl	-0.0538	-0.152	-1.74	0.0089
P-value	0.957	0.879	0.0818	0.993
No. of observation	109	100	63	57

TABLE 6
THE SENSITIVITY OF TAX AVOIDANCE AND EARNINGS MANAGEMENT TO FIRMS' SIZE

The dependent variables are tax avoidance and earnings management. IFRS connotes the adoption of international financial reporting standards. CSR represents corporate social responsibility engagement of the firm. Big4 Auditors is a dummy variable that takes 1 if the firm is being audited by one of the Big 4 Accounting firms. Leverage is long-term debt scaled by total assets. Equity capital is used as a proxy to measure the degree of capitalization. Size is a control variable measured as the natural logarithm of total assets Asset tangibility measures the physical property of the firm. Age measures the number of years the firm has been in existence and is used as a proxy for experience. All regressions are estimated using dynamic panel-data estimation, Two-step System. Standard errors are reported in parentheses. ***, **, and * indicates statistical significance at the 1% 5% and 10% level respectively. The following diagnostic tests are reported: (1) The Sargent test for over identification restriction which the null hypothesis is that instruments are exogenous (2) The Chi2 for joint significance of instruments (3) The Arl tests for the presence of auto correlation and (4) Observations

	Tax avoidance		**Earnings management**	
	(1)	(2)	(3)	(4)
Tax avoidance_lag	-0.457***	-0.0857		
	(000)	(0.441)		
Earnings management_lag			-0.0412	-0.245
			(0.884)	(0.345)
Earnings management	7.158	6.338**		
	(0.11)	(0.009)		
Tax avoidance			0.327	0.93
			(0.13)	(0.083)
IFRS	-0.245	-0.22	-0.240*	-0.395***
	(0.675)	(0.438)	(0.026)	(0.001)
CSR	-0.577	-0.592**	0.177**	0.172**
	(0.15)	(0.002)	(0.003)	(0.002)
Earnings mgt * size	-0.375	-0.333**		
	(0.11)	(0.009)		
Tax avoidance * size			-0.015	-0.0501
			(0.162)	(0.134)
Big 4 Auditors	0.332	0.247	-0.204***	-0.240***
	(0.391)	(0.201)	(0.001)	(000)
Leverage	0.136		-0.0773	
	(0.735)		(0.174)	
Equity capital		3.38E-10		4.04e-09***
		(0.127)		(000)
Size	-0.0981	-0.140*	-0.0175	-0.0884***
	(0.299)	(0.012)	(0.232)	(000)
Assets tangibility	-0.602	-0.502	-0.0879	-0.118
	(0.419)	(0.191)	(0.52)	(0.431)
Age	0.0131	0.0118	0.00118	0.00106
	(0.303)	(0.063)	(0.63)	(0.627)
Sargent test	0.216	9.09	6.255	4.545
P-value	0.995	0.0589	0.181	0.337
Chi2	29.59***	37.21***	65.93***	79.32***
Arl	-0.343	-0.316	-1.918	-0.243
P-value	0.732	0.752	0.0552	0.808
No. of observation	109	100	63	57