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Big 4 auditing companies, earnings manipulation and earnings conservatism: evidence from an emerging market

Abstract

This study focuses on South African listed companies and investigates the relation between Big 4 auditing companies, earnings management and earnings conservatism. It shows that companies audited by a Big 4 auditor leads to a more timely recognition of large losses and to lower levels of earnings manipulation and higher conditional conservatism. The findings report that the conditional form of conservatism is negatively related to unconditional conservatism. Higher conservatism is also reported for firms with high leverage and those that convey bad news. The opposite has been found for firms with high growth. The findings, in general support the notion that the new Companies' Act in South Africa and the King III are effective corporate governance tools and the observed cases of corporate failure may be due to other factors, including management hubris.

Keywords: Big 4 auditing, conditional conservatism, unconditional conservatism, managerial opportunism, earnings management.
JEL Classification: M41.

Introduction

Earnings manipulation is widely used to reduce earnings volatility and influnce key financial numbers. The presence of conservatism would mitigate profit overstatement and financial statement distortions. This in combination with being audited by a big auditor would lead to higher quality financial reporting, especially of difficult-to-verify accounting information (Basu, 2005; Francis and Wang, 2008; Balasubramanian et al., 2010).

High quality accounting disclosures verified by unqualified audit opinions would reduce information asymmetry and would subsequently lead to lower cost of equity and better terms of financing (Ashbaugh-Skaife et al., 2006). Being audited by a Big 4 auditor would reflect company's determination to commit to high quality financial reporting and to provide stakeholders with proprietary and private information, thereby reducing the scope for accounting manipulations (Palea, 2007).

This study examines whether being audited by a big auditor reduces earnings manipulation and increases the level of conservatism. A major research issue is the deviation between financial reporting environment and company compliance in emerging markets. It would be expected that being audited by a big auditor would reduce this gap and improve company trust.

This study focuses on South Africa. Ever since the well-documented demise of Enron, WorldCom and Parmalat in late 1990s and early 2000s, there has not been any corporate collapse of the same magnitude instigated by the perceived poor audit quality that we are aware of. However, the reality is, companies still collapse within different countries. The fall of African Bank (AB hereafter) in South Africa as recently as in 2014 under the watch of regulators and their own auditors is a case in point. Anecdotal evidence shows that the financial crisis in AB was entirely foreseeable but none of the regulators nor the audit firm sounded the alarm bells. In actual fact, the AB auditors expressed an unqualified opinion on their financial statement for 2013. Few months later it was revealed that the company underestimated its provisions for bad debts (News24, accessed on 03/05/2016), something which should have raised red flag for the auditors. The pertinent question therefore is whether it is possible that the auditors and regulators such as the South African reserve bank were not able to notice the problem in AB well in advance.

South Africa has one of the best regulated systems in the world and yet there are still occurrences of audit risk. The two most important corporate governance tools in place are the new Companies Act 71 of 2008 (mandatory implementation since 2011) and King III report. The Company Act (2008) has strengthened the corporate governance in different ways. One, it has made rotation of auditor mandatory in order to achieve auditor independence. Thus, the same individual/company may not serve as the auditor or designated auditor of a company for five consecutive years. In addition, South Africa had a regulation on joint audit since 1973 but in the new Companies Act of 2008, joint audit is a voluntary setting with auditor rotation. This means, if a company appoints two or more auditors, it must ensure auditor rotation once every five years to ensure con-

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tinuity (Ratzinger-Sakel et al., 2012). Two, under the new Companies Act, companies are not allowed to appoint an auditor, if the same auditor rendered other specified services (non-audit services) to the same client (IRBA and SAICA, 2015). Although results are inconclusive, most studies (e.g., Quick and Warming-Rasmussen, 2009) find that the provision of audit in addition to other non-audit services creates a negative perception amongst investors with regards to auditor independence. Lastly, the new Companies Act has strengthened the role of the audit committees immensely, as audit committees can now assert choice and control over the audit process in the company (Ryan, 2012). The quality of audit committee is very important as Ho et al. (2014) found that post-SOX era (2003-2004), the likelihood that companies could engage in downward forecast guidance is significantly lowered for firms that have larger and more independent audit committees.

King III report (effective from March 2010) is a code of good governance tool in South Africa, and has been adopted in other jurisdictions as well. The report applies 'apply or explain' approach as opposed to 'apply or else'. Thus, contrary to Sarbanes Oxley, King III is not legislated but is self-regulatory, which may raise the question of whether companies do actually apply King's report when compiling earning information of their companies as its application would improve audit and earning quality. Notwithstanding the non-compulsory nature of the code, among others, it strengthens and empowers audit committees beyond what is required by the Companies Act. Most companies in South Africa comply with the King III report. Both the Act and King III report show how advanced South Africa is in terms of managing possible audit failures. In fact, if anything, the world can learn a whole lot more from South Africa. However, even in light of this superior corporate governance, the country still experiences corporate failures, which are often accompanied by audit failure innuendos.

Notably, South Africa is an emerging market and Chen et al. (2009) state that firms that operate in emerging markets and increase the quality of disclosure would be viewed more positively than companies that operate in developed countries, where the requirements for disclosure are standardized. Also, in emerging markets, the distance between investor protection regulations and firm level compliance may be significant and therefore, firms that operate in such markets may seek external means of validating and communicating their superior managerial ability by resorting to big auditor to audit their accounts and eliminate investors' concerns. Moreover, in general, the big 4 audit firms in South Africa have institutional preference, with banks, stock markets and other institutions requiring that their major clients use only Big 4 auditors (Ryan, 2012).

The findings of this study show that companies that are audited by a Big 4 auditor tend to recognise large losses more timely and to engage less in earnings management. This study has found that conditional conservatism is positively related to Big 4 auditing companies. It is found that companies that are audited by a big 4 auditor display less unconditional conservatism, which might otherwise facilitate managerial opportunism. The findings report that the conditional form of conservatism is negatively related to unconditional conservatism. The study provides evidence of asymmetric disclosure of losses for firms with high leverage. The same holds for high quality disclosers that display bad news. The findings also show that firms that are in a growth phase tend to provide less conservative information in order to influence their growth prospects. These findings imply that the regulations in South Africa (e.g. Companies Act no. 71 of 2008) as well and King III report of good practice are successful in strengthening corporate governance as well as ensuring good audit quality. However, regulation cannot completely obliterate the audit risk and this is why there will always be incidences of companies collapsing.

Francis et al. (2013) investigated whether audit market concentration harm the quality of the audited earnings in 42 countries including South Africa and concluded that the quality of big four audits is higher on average, when the Big 4 has larger market share in a country. However, Francis et al. (2013) investigate the audit quality of the Big 4 in various countries without linking them to the governance framework in their respective jurisdiction which may have a bearing on the quality of their audit. The fact that country's corporate governance model should be taken into account to understand the environment, in which the Big 4 operates 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. In addition, Hay et al. (2006) provide evidence that research investigating audit markets has largely been confined to developed countries and our knowledge of markets for audit in other regulatory environment is limited. Furthermore, Francis investigates the quality of audit in 42 countries between 1999 and 2007, whereas the current study investigates the period between 2008 and 2013, the period which coincides with the implementation in South Africa of new Companies Act and Kings III.

The remaining sections of this study are as follows. Section 1 presents the background of the study. Section 2 shows the research hypotheses and the data. Section 3 discusses the empirical findings, and final section presents the conclusions of the study.

1. Background considerations

Earnings management is the opportunity for managers to reduce the variability of reported earnings and thereby improve earnings quality, and subsequently reduce the information asymmetry between managers and investors (Gul et al., 2003; Ghosh and Olsen, 2009). The negative perspective of earnings management is that the process complicates equity evaluation as it conceals companies' actual performance and masks underlying trends in revenue and earnings growth that help to build expectations of future growth (McNichols and Strubben, 2008). 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).

To limit earnings management, tighter accounting standards and more conservative approach in compiling accounting information would be required. For instance, after the collapse of Enron and WorldCom because of poor audit quality, different countries reacted differentially towards improving the governance system. For instance, USA passed Sarbanes Oxley Act to protect investors from the possibility of fraudulent accounting practices (see Chan et al., 2008; Mitra et al., 2009). South Africa improved on the companies act and promoted the code of good practice through the Kings' reports. The question is whether all these changes have reduced the audit risk.

Earnings conservatism results in accounting information that reflects economic losses in a timelier manner than gains (Basu, 1997; Beaver and Ryan, 2005). Research divides conservatism into conditional and unconditional. Conditional conservatism relates to efficient debt and governance contracting and increases the contracting efficiency and the quality of reported accounting information (Basu, 1997; Ball and Shivakumar, 2005; Cano-Rodriguez, 2010). Unconditional conservatism relates to tax, litigation and managerial self-interest objectives and is likely to reduce the contracting efficiency and reporting quality of financial reports (Ball and Shivakumar, 2005; Qian, 2007; Ball et al., 2008). Higher conditional conservatism is observed in common-law countries (Ball et al., 2000) and in settings with strong corporate governance mechanisms (Beekes et al., 2004).

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 (Roychowdhurry, 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.

2. Research hypotheses and data

2.1. Research hypotheses. *2.1.1. Discretionary accruals and Big 4 auditing companies.* It is reported that being audited by a big auditoris is likely to lead to the production of financial statements of higher quality and transparency and to lower earnings manipulatio, (Krishnan, 2003). The hypothesis that is tested is presented below and is based on Tendeloo and Vanstraelen (2005).

H_1: Companies that are audited by a Big 4 auditor are likely to exhibit lower discretionary accruals.

$$DAC_{i,t} = a_0 + a_1 Big4_{i,t} + a_2 Big4_{i,t} x\ OCF_{i,t} + \\ + a_3\ Big4_{i,t} x\ LNA_{i,t} + a_4\ Big4_{i,t} x\ ROA_{i,t} + \\ a_5 Big4_{i,t} x\ TLSFU_{i,t} + a_6\ SP_{i,t} + a_7\ LL_{i,t} + e_{i,t}, \quad (1)$$

where $DAC_{i,t}$ is discretionary accruals. They are estimated based on the following cross-sectional Jones model (Jones, 1991) (see also Kothari et al., 2004; Garza-Gomez et al., 2006).

$$AC_{i,t} = a_0\ (1/A_{i,t-1}) + a_1 \Delta REV_{i,t} + a_2\ PPE_{i,t} + e_{i,t}, \quad (2)$$

where $AC_{i,t}$ is accruals in year t scaled by lagged total assets.

$A_{i,t-1}$ is total assets in year t-1, $\Delta REV_{i,t}$ is the change in revenues scaled by lagged total assets, $PPE_{i,t}$ is property, plant and equipment scaled by lagged total assets, $e_{i,t}$ is the error term. $Big4_{i,t} = 1$ for companies that are audited by a Big 4 auditor and $Big4_{i,t} = 0$ otherwise, $OCF_{i,t}$ is operating cash flows scaled by total assets, $LNA_{i,t}$ is the log of total assets, $ROA_{i,t}$ is net income before extraordinary items scaled by total assets, $TLSFU_{i,t}$ is total liabilities scaled by shareholders' funds, $SP_{i,t}$ is a dummy variable indicating a measure of small profits. $SP_{i,t} = 1$ if net profit scaled by total assets is between 0 and 0.01 and $SP_{i,t} = 0$ otherwise, $LL_{i,t}$ is a dummy variable indicating a measure of timely loss recognition. $LL_{i,t} = 1$ if net profit scaled by total assets is less than −0.20 and $LL_{i,t} = 0$ otherwise. $e_{i,t}$ is the error term.

2.1.2. Conservatism and Big 4 auditing companies. Unconditional conservatism may arise "from tax, litigation and managerial self-interest" (Cano-Rodriguez, 2010, p. 132). In contrast, conditional conservatism improves the quality of the disclosure of difficult-to-verify accounting information (Basu, 2005). The hypothesis that is tested is presented below.

H_2: Companies that are audited by a Big 4 auditor are likely to display higher conditional conservatism and lower unconditional conservatism.

$$DAC_{i,t} = a_0 + a_1\ CFD_{i,t} + a_2\ OCF_{i,t} + \\ + a_3\ CFD_{i,t}\ x\ OCF_{i,t} + a_4\ Big4_{i,t} + \\ + a_5\ Big4_{i,t}\ x\ CFD_{i,t} + a_6\ Big4_{i,t}\ x\ OCF_{i,t} + \\ + a_7\ Big4_{i,t}\ x\ CFD_{i,t} xOCF_{i,t} + e_{i,t}, \quad (3)$$

where $DAC_{i,t}$ is the discretionary accruals defined as in equation (1), $CFD_{i,t}$ is a dummy variable representing the sign of operating cash flows. $CFD_{i,t} = 1$ if operating cash flows scaled by total assets is negative and $CFD_{i,t} = 0$ otherwise, $OCF_{i,t}$ is operating cash flows scaled by total assets, $Big4_{i,t} = 1$ for companies that are audited by a Big 4 auditor and $Big4_{i,t} = 0$ otherwise, $e_{i,t}$ is the error term.

The relation between Big 4 auditing companies and conditional conservatism is captured with a_7. A significantly positive a_7 would signify that companies that are audited by a Big 4 auditor display significantly greater conditional conservatism compared to companies that are not. In other words, in the presence of conditional conservatism, a company that is audited by a Big 4 auditor would be expected to exhibit low discretionary accruals, even if it experienced negative or low cash flows.

To capture the relation between Big 4 auditing companies and unconditional conservatism, the study employs the variable $UC\ (Big4 = 1) = \hat{\alpha}_4 +$

$\hat{\alpha}_5$ *xNOCF* (*Big4* = 1) used in Cano-Rodriguez (2010, p. 141). $\hat{\alpha}_4$ and $\hat{\alpha}_5$ are the estimates of α_4 and α_5 presented in equation (3). *NOCF* (*Big4* = 1) is the proportion of companies that are audited by a big 4 auditor and display negative cash flows. *UC* (*Big4* = 1) displays a negative association with unconditional conservatism.

2.1.3. Conditional versus unconditional conservatism. Conditional conservatism is negatively associated with unconditional conservatism (Qiang, 2007; vander Bauwhede, 2007). Here, this study tests how being audited by Big 4 aditor is related to conditional and unconditional conservatism. The hypothesis is presented below:

H_3: Conditional conservatism is likely to display a negative asscociation with unconditional conservatism for companies that are audited by a Big 4 auditor.

The model used here is based on Cano-Rodriguez (2010, p. 153) and is presented below:

$$Rank\ UC_{i,t} = \alpha_0 + \alpha_1 Big4P_{i,t} + \alpha_2 A_{i,t} + \\ + \alpha_3 TLSFU_{i,t} + \alpha_4 MVBV_{i,t} + e_{i,t}; \quad (4)$$

$$Rank\ CC_{i,t} = \alpha_0 + a_1\ Rank\ UC_{i,t} + a_2 Big4P_{i,t} + \\ + \alpha_3 A_{i,t} + \alpha_4 TLSFU_{i,t} + \alpha_5 MVBV_{i,t} + e_{i,t}; \quad (5)$$

where $Rank\ UC_{i,t}$ proxies for unconditional conservatism and is the rank of $UC_{i,t}$ computed as $\hat{\alpha}_0 + \hat{\alpha}_1 xNOCF$. $\hat{\alpha}_0$ and $\hat{\alpha}_1$are the estimates of α_0 and α_1 of equation (6). *NOCF* is the proportion of companies that are audited by a Big 4 auditor and display negative cash flows.

$$DAC_{i,t} = a_0 + a_1\ CFD_{i,t} + a_2\ OCF_{i,t} + \\ + a_3\ CFD_{i,t}\ x\ OCF_{i,t} + e_{i,t} \quad (6)$$

All variables in equation (6) are defined as in equation (3).

$Rank\ CC_{i,t}$ accounts for conditional conservatism and is the rank of α_3 obtained from equation (6), $Big4P_{i,t}$ is the proportion of companies that are audited by a Big 4 auditor, $A_{i,t}$ is the average of the log of total assets, $TLSFU_{i,t}$ is the average of total liabilities scaled by shareholders' funds, $MVBV_{i,t}$ is the average of the ratio of market value to book value, $e_{i,t}$ is the error term.

This study also examines earnings sensitivity and conservatism in relation to Big 4 auditing. The model used here is based on Ball et al. (2000) and LaFond and Watts (2008) and is implemented for samples of positive and negative returns separately.

$$NI_{i,t} = a_0 + a_1\ R_{i,t} + a_2\ Big4_{i,t} + \\ + a_3 Big4_{i,t}\ x\ R_{i,t} + e_{i,t} \quad (7)$$

where $NI_{i,t}$ is net income before extraordinary items scaled by beginning of fiscal year market value of equity, $R_{i,t}$ is the annual stock return, $Big4_{i,t} = 1$ for companies that are audited by a big 4 auditor and $Big4_{i,t} = 0$ otherwise, $e_{i,t}$ is the error term.

It is expected that a_3 will be significantly negative in the light of good news, and positive in the light of bad news. The model below combines the positive and negative return samples (see LaFond and Watts, 2008).

$$NI_{i,t} = a_0 + a_1\ NDR_{i,t} + a_2\ R_{i,t} + a_3\ R_{i,t}\ x\ NDR_{i,t} + \\ + a_4 Big4_{i,t} + a_5\ NDR_{i,t}\ x\ Big4_{i,t} + a_6 Big4_{i,t}\ x\ R_{i,t} + \\ + a_7\ R_{i,t}\ x\ NDR_{i,t}\ x\ Big4_{i,t} + e_{i,t}, \quad (8)$$

where $NDR_{i,t} = 1$ for negative returns and $NDR_{i,t} = 0$ otherwise. All other variables are defined as in equation (7).

The model below is based on Fama and MacBeth (1973) and LaFond and Watts (2008) and controls for growth and leverage.

$$NI_{i,t} = a_0 + a_1\ NDR_{i,t} + a_2\ R_{i,t} + a_3\ R_{i,t}\ x\ NDR_{i,t} + \\ + a_4\ MVBV_{i,t} + a_5\ MVBV_{i,t}\ x\ NDR_{i,t} + \\ + a_6\ MVBV_{i,t}\ x\ R_{i,t} + a_7\ MVBV_{i,t}\ x\ R_{i,t}\ x\ NDR_{i,t} + \\ + a_8\ TLSFU_{i,t} + a_9\ TLSFU_{i,t}\ x\ NDR_{i,t} + \\ + a_{10}\ TLSFU_{i,t}\ x\ R_{i,t} + a_{11}\ TLSFU_{i,t}\ x\ R_{i,t}\ x\ NDR_{i,t} + \\ + a_{12}\ Big4_{i,t} + a_{13}\ Big4_{i,t}\ x\ NDR_{i,t} + \\ + a_{14}\ Big4_{i,t}\ x\ R_{i,t} + a_{15}\ Big4_{i,t}\ x\ R_{i,t}\ x\ NDR_{i,t} + e_{i,t} \quad (9)$$

All variables are defined as in equations (6), (7) and (8).

2.2. Data. Accounting and financial data were collected from Bloomberg and Inet Bridge. The sample consists of non-financial companies that are listed on the Johannesburg Stock Exchange (JSE). Banks, insurance, pension and brokerage companies have been excluded, as their accounting methods are not always comparable with those of industrial companies. The final sample consists of 687 companies over the entire sample period. The period of investigation is 2008 to 2012. All sample companies are IFRS users. This study has accounted for heteroscedasticity, autocorrelation, departure from normality and multicollinearity, where appropriate.

3. Empirical findings

3.1. Descriptive statistics. Table 1 presents the descriptive statistics for the sample companies examined in this study. The descriptive statistics show that the companies of the sample display a mean of 0.068 for cash flows from operating activities (*OCF*) and a mean of 2.289 for leverage (*TLSFU*). The mean value for growth (*MVBV*) is 3.557. Profitability (*ROA*) exhibits a mean of 0.053. The proportion of companies that are audited by a Big 4 auditor and display negative cash flows (*Big4P*) is 65.1%. Size as expressed by the natural logarithm of total assets (*LNA*) is 7.521. Finally, the mean value of net income before extraordinary items (*NI*) is 8.2.

3.2. Discretionary accruals and Big 4 auditing. Table 2 provides evidence that H_1 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 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. *Big4 x OCF* and *Big4 x ROA* are significantly positive, implying that companies that are audited by a big 4 auditor and display low operating cash flows (*OCF*) or return on assets (*ROA*) would display low discretionary accruals. Likewise, the significantly negative coefficient for *Big4 x LNA* indicates that large companies that are audited by a Big 4 auditor would engage less in earnings management. Companies that are audited by a Big 4 auditor carry a significantly positive coefficient for *LL*, implying that they tend to recognise large losses more timely.

3.3. Conservatism and Big 4 auditing. Table 3 shows that consistent with H_2, a_7 (*Big4 x CFDxOCF*) is significantly positive, showing that companies that are audited by a Big 4 auditor display higher conditional conservatism. The coefficient obtained for *UC* (*Big4* = 1) (not reported here) is significantly positive. This is negatively related to unconditional conservatism and thus shows that being audited by a Big 4 auditor would lead to lower unconditional conservatism.

3.4. The relation between conditional and unconditional conservatism. Panel A of Table 4 presents the results obtained from equation (4) regarding the unconditional form of conservatism. Consistent with H_2, the coefficient obtained for *Big4P* is significantly positive, indicating that companies that are audited by a Big 4 auditor exhibit higher *Rank UC* and subsequently lower unconditional conservatism, since *Rank UC* is inversely related to unconditional conservatism.

Panel B of Table 4 presents the results obtained from equation (5) regarding the conditional form of conservatism. Consistent with H_3, the coefficient obtained for *Rank UC* is significantly positive, reflecting a negative association between conditional and unconditional conservatism, since the relation between *Rank UC* and unconditional conservatism is negative. Consistent with H_2, the coefficient obtained for *Big4P* is significantly positive, implying that companies that are audited by a Big 4 auditor exhibit higher conditional conservatism.

Panel A of Table 5 presents the findings obtained from equation (7) for the positive return sample and shows that, consistent with H_2, companies that are audited by a Big 4 auditor tend to exhibit higher conservatism. In particular, less profits are reflected in the financial statements of companies that are audited by a Big 4 auditor and bear good news, as shown by the negative coefficient obtained for *Big4 x R*. Likewise, Panel B presents the results for the negative return sample and indicates that more losses are reflected in the financial statements of companies that are audited by a Big 4 auditor and exhibit bad news, as shown by the positive coefficient obtained for *Big4 x R*.

Panel C of Table 5 presents the findings obtained from equation (8) for positive and negative return samples combined. As shown above, the coefficient obtained for *Big4 x R* is significantly negative, suggesting that the reported earnings of companies that are audited by a Big 4 auditor incorporate less good news. The coefficient obtained for *R x NDR x Big4* is significantly positive, indicating that Big 4 auditing would lead to greater conservatism in reported earnings. The provision of informative disclosures on losses and difficult-to-verify items would increase investor confidence (LaFond and Watts, 2008).

According to Panel D of Table 5, *MVBV x R x NDR* carries a significantly negative coefficient, suggesting that high growth is related to less conservatism. *TLSFU x R x NDR* is significantly positive, showing that higher leverage and stricter debt covenants would lead to higher conservatism (see also Frankel and Roychowdhury, 2006). Finally, *Big4 x R x NDR* is significantly positive, indicating that Big 4 auditing is likely to lead to greater conservatism.

Conclusions

This study focuses on South African listed companies and investigates the relation between Big 4 auditing, earnings management and earnings conservatism. The findings show that Big 4 auditing is negatively related to earnings management. Also, large company's size is adversely related to earnings management.

This study provides evidence that Big 4 auditing promotes conservatism and would lead to less loss understatements and profit overstatements. Companies that are audited by a Big 4 auditor apply conditional conservatism. And this study shows evidence of higher conservatism for firms that report bad news and for firms that report good news. It also shows that leverage is positively associated with conservatism. In contrast, high growth is linked to lower levels of conservatism. The findings may also be interpreted as indicating that King's codes are effective in promoting quality disclosures.

The findings of this study may be useful for accounting standard setters especially when attempting to reduce information asymmetry and managerial opportunism.

This study contributes to the literature by providing evidence that companies that are audited by a Big 4 auditor in emerging markets adopt a conservative approach in reporting losses and profits, implying that Big 4 auditing would enhance contracting efficiency

and reported numbers' validity. This should hold both in the absence and in the presence of unfavorable financial circumstances and irrespective of the sign or the size of their financial numbers. Under conservatism and with the aid of Big 4 auditors, the asymmetric disclosure of profits and losses would draw financial analysts' attention and motivate managers to focus on loss-generating causes and performance maximization more effectively. Overall, in the South African context, the results show that the corporate governance tools consisting of Companies' Act and King III report are effective in improving corporate governance. However, other motives, such as an effort by a growth company to portray better performance to enhance future growth prospects are hard to manage as a result; there will always be rare (but with far reaching consequences) occurrences of companies collapsing.

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Appendix

Table 1. Descriptive statistics

Variables	Mean	Std deviation
$OCF_{i,t}$	0.068	0.390
$TLSFU_{i,t}$	2.289	19.192
$MVBV_{i,t}$	3.557	26.032
$ROA_{i,t}$	0.053	0.486
$Big4P_{i,t}$	0.651	1E-16
$LNA_{i,t}$	7.521	2.393
$NI_{i,t}$	8.200	311.204

Notes: The sample period is 2008 to 2012. The sample consists of 687 firms over the entire sample period. $OCF_{i,t}$ is operating cash flows scaled by total assets. $TLSFU_{i,t}$ is total liabilities scaled by shareholders' funds. $MVBV_{i,t}$ is market to book value. $ROA_{i,t}$ is net income before extraordinary items scaled by total assets. $Big4P_{i,t}$ is the proportion of firms that are audited by a Big 4 auditor. $LNA_{i,t}$ is the log of total assets. $NI_{i,t}$ is net income before extraordinary items scaled by beginning of fiscal year market value of equity.

Table 2. Discretionary accruals and Big 4 auditing (equation 1)

Variables	Coefficients
$Big4_{i,t}$	-1.129***
	(0.166)
$Big4_{i,t}$ x $OCF_{i,t}$	0.859***
	(0.317)
$Big4_{i,t}$ x $LNA_{i,t}$	-0.178***
	(0.019)
$Big4_{i,t}$ x $ROA_{i,t}$	0.265*
	(0.165)
$Big4_{i,t}$ x $TLSFU_{i,t}$	-0.006
	(0.005)
$LL_{i,t}$	0.179***
	(0.051)
$SP_{i,t}$	-
Constant	0.137
	(0.169)

Notes: *** and * indicate statistical significance at the 1% and 10% level (two-tailed) respectively. The standard error is in parentheses. The dependent variable in equation (1) is $DAC_{i,t}$, which is the discretionary accruals that are estimated using the cross-sectional Jones model. $Big4_{i,t}$ = 1 for firms that are audited by a Big 4 auditor and $Big4_{i,t}$ = 0 otherwise. $OCF_{i,t}$ is operating cash flows scaled by total assets. $LNA_{i,t}$ is the log of total assets. $ROA_{i,t}$ is net income before extraordinary items scaled by total assets. $TLSFU_{i,t}$ is total liabilities scaled by shareholders' funds. $LL_{i,t}$ = 1 if net profit scaled by total assets is less than -0.20 and $LL_{i,t}$ = 0 otherwise. $SP_{i,t}$ = 1 if net profit scaled by total assets is between 0 and 0.01 and $SP_{i,t}$ = 0 otherwise.

Table 3. Conservatism and Big 4 auditing (equation 3)

Variables	Coefficients
$CFD_{i,t}$	0.006
	(0.163)
$OCF_{i,t}$	0.116
	(0.827)
$CFD_{i,t}$ x $OCF_{i,t}$	-0.037
	(0.152)
$Big4_{i,t}$	0.388***
	(0.085)
$Big4_{i,t}$ x $CFD_{i,t}$	-0.268*
	(0.155)
$Big4_{i,t}$ x $OCF_{i,t}$	-0.924**
	(0.437)
$Big4_{i,t}$ x $CFD_{i,t}$ x $OCF_{i,t}$	0.176***
	(0.053)

Table 3 (cont.). Conservatism and Big 4 auditing (equation 3)

Variables	Coefficients
Constant	1.234
	(1.484)
R^2	0.019

Notes: ***, ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively. The standard error is in parentheses. The dependent variable in equation (3) is $DAC_{i,t}$, which is the discretionary accruals that are estimated using the cross-sectional Jones model. $CFD_{i,t} = 1$ if operating cash flows scaled by total assets is negative and $CFD_{i,t} = 0$ otherwise. $OCF_{i,t}$ is operating cash flows scaled by total assets. $Big4_{i,t} = 1$ for firms that are audited by a Big 4 auditor and $Big4_{i,t} = 0$ otherwise.

Table 4. Conditional and unconditional conservatism

Panel A. Equation 4		Panel B. Equation 5	
Variables	Coefficients	Variables	Coefficients
$Big4P_{i,t}$	0.009**	$RankUC_{i,t}$	2.141**
	(0.004)		(0.509)
$A_{i,t}$	-0.0001	$Big4P_{i,t}$	1.004***
	(0.000)		(0.419)
$TLSFU_{i,t}$	-2.712	$A_{i,t}$	-0.0001**
	(3.130)		(0.000)
$MVBV_{i,t}$	1.599	$TLSFU_{i,t}$	3.921**
	(2.025)		(0.320)
Constant	2.114	$MVBV_{i,t}$	-2.961**
	(3.730)		(0.190)
R^2	0.152	Constant	3.074***
			(0.324)
		R^2	0.993

Notes: *** and ** indicate statistical significance at the 1% and 5% level (two-tailed), respectively. The standard error is in parentheses. The dependent variable in equation (4) is $RankUC_{i,t}$, which accounts for unconditional conservatism and is the rank of $UC_{i,t}$ computed as $\hat{\alpha}_0 + \hat{\alpha}_1 xNOCF$, with $\hat{\alpha}_0$ and $\hat{\alpha}_1$ being the estimates of α_0 and α_1 of equation (6). The dependent variable in equation (5) is $Rank\ CC_{i,t}$, which accounts for conditional conservatism and is the rank of α_3 obtained from equation (6). $NOCF$ is the proportion of firms that are audited by a Big 4 auditor and display negative cash flows. $Big4P_{i,t}$ is the proportion of firms that are audited by a Big 4 auditor. $A_{i,t}$ is the average of the log of total assets. $TLSFU_{i,t}$ is the average of total liabilities scaled by shareholders' funds. $MVBV_{i,t}$ is the average of the ratio of market value to book value.

Table 5a. Earnings sensitivity and conservatism

Panel A. Equation 7. Firms with positive returns		Panel B. Equation 7. Firms with negative returns	
Variables	Coefficients	Variables	Coefficients
$R_{i,t}$	0.017	$R_{i,t}$	1.444*
	(0.043)		(0.549)
$Big4_{i,t}$	-1.792	$Big4_{i,t}$	1.364*
	(15.585)		(0.725)
$Big4_{i,t} \times R_{i,t}$	-1.174***	$Big4_{i,t} \times R_{i,t}$	1.028***
	(0.315)		(0.253)
Constant	0.697	Constant	0.092
	(0.302)		(0.05)
R^2	0.091	R^2	0.075

Notes: *** and * indicate statistical significance at the 1% and 10% level (two-tailed), respectively. The standard error is in parentheses. The dependent variable in equation (7) is $NI_{i,t}$, which is net income before extraordinary items scaled by beginning of fiscal year market value of equity. $R_{i,t}$is the annual stock return. $Big4_{i,t} = 1$ for firms that are audited by a Big 4 auditor and $Big4_{i,t} = 0$ otherwise.

Table 5b. Earnings sensitivity and conservatism

Panel C. Equation 8		Panel D. Equation 9	
Variables	Coefficients	Variables	Coefficients
$NDR_{i,t}$	0.130	$NDR_{i,t}$	1.021
	(0.070)		(1.629)
$R_{i,t}$	0.213	$R_{i,t}$	0.318
	(0.290)		(0.219)
$R_{i,t}x\ NDR_{i,t}$	0.877	$R_{i,t} \times NDR_{i,t}$	0.445
	(0.632)		(1.294)

Table 5b (cont.). Earnings sensitivity and conservatism

Panel C. Equation 8		Panel D. Equation 9	
Variables	Coefficients	Variables	Coefficients
$Big4_{i,t}$	1.145	$MVBV_{i,t}$	-0.488
	(0.665)		(1.359)
$NDR_{i,t}$ x $Big4_{i,t}$	0.337	$MVBV_{i,t}$ x $NDR_{i,t}$	0.627
	(0.194)		(3.128)
$Big4_{i,t}$ x $R_{i,t}$	-0.120***	$MVBV_{i,t}$ x $R_{i,t}$	0.027
	(0.041)		(4.500)
$R_{i,t}$ x $NDR_{i,t}$ x $Big4_{i,t}$	1.381*	$MVBV_{i,t}$ x $R_{i,t}$ x $NDR_{i,t}$	-0.067**
	(0.738)		(0.034)
Constant	0.416	$TLSFU_{i,t}$	1.607
	(0.296)		(1.933)
R^2	0.074	$TLSFU_{i,t}$ x $NDR_{i,t}$	0.044*
			(0.024)
		$TLSFU_{i,t}$ x $R_{i,t}$	1.411
			(5.201)
		$TLSFU_{i,t}$ x $R_{i,t}$ x $NDR_{i,t}$	1.039***
			(0.447)
		$Big4_{i,t}$	0.184
			(0.163)
		$Big4_{i,t}$ x $NDR_{i,t}$	1.222***
			(0.486)
		$Big4_{i,t}$ x $R_{i,t}$	0.987
			(57.369)
		$Big4_{i,t}$ x $R_{i,t}$ x $NDR_{i,t}$	1.731***
			(0.527)
		Constant	0.889
			(0.832)
		R^2	0.088

Notes: ***, ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed), respectively. The standard error is in parentheses. The dependent variable in equations (8) and (9) is $NI_{i,t}$, which is net income before extraordinary items scaled by beginning of fiscal year market value of equity. $NDR_{i,t}$ = 1 for negative returns and $NDR_{i,t}$ = 0 otherwise. $R_{i,t}$ is the annual stock return. $Big4_{i,t}$ = 1 for firms that are audited by a Big 4 auditor and $Big4_{i,t}$ = 0 otherwise. $MVBV_{i,t}$ is market to book value. $TLSFU_{i,t}$is total liabilities scaled by shareholders' funds.