The quality of reported earnings and the monitoring role of the board: Evidence from small and medium companies

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A B S T R A C T

The purpose of this paper is to investigate whether corporate governance initiatives in South Africa that relate to the monitoring ability of the non-executive directors on the board of small and medium companies have improved earnings quality by adopting conservative accounting practices. The sample construct includes the 2008 – 2011 reporting periods of South African companies listed on the Alternative Exchange (AltX). A reverse regression of earnings on returns was used to examine the market-based attributes of earnings quality, i.e. conservatism and the timeliness of earnings. No evidence was found that the boards of small and medium-sized companies are inclined to adopt conservative accounting practices that will result in the asymmetric timeliness of earnings. There is also no evidence that the quality of reported earnings improved as a result of the monitoring ability of the board with reference to the representation of non-executive directors on the board. The findings can be of interest to investors, managers and regulators as the efficiency of corporate boards and the transparency of financial reporting have implications for all of them.

Key words: agency theory, corporate governance, non-executive directors, board composition, earnings quality, conservatism, timeliness of earnings, monitoring ability, small and medium-sized companies

"Earnings could be used to tell the truth but also could be used in cheating or misleading," (Li 2009). The difference between true earnings and reported earnings impacts on earnings quality, which is described by the capital markets as a summary indicator of financial reporting quality (Francis, Olsson & Schipper 2008; McEwen 2009).

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Corporate scandals like Enron, WorldCom, Parmalat and, more specifically, Leisurenet and Fidentia in South Africa, have raised questions about earnings quality and corporate governance. Many researchers are of the view that these corporate failures were caused by inadequate corporate governance, which included lack of oversight from the board of directors and poor strategic decisions (Li 2009; Hamilton & Micklewait 2006; Grant & Visconti 2006; García Osma & Noguer 2007).

Evidence in the corporate governance and accounting literature suggests that corporate governance initiatives have improved financial reporting quality. The majority of these studies have relied on data of listed companies from the US, the UK and to a limited extent, Europe. Despite the importance and empirical findings of these studies it is questionable whether these results can be generalised to other time periods and countries, due to different accounting standards and variation in corporate governance requirements at the time. The third King Report on Corporate Governance (King III) was released in 2009 in response to changes in South African legislation and changes in global corporate governance trends (King 2009). One of the key changes introduced by King III relates to the composition of the board, which is likely to affect the oversight role and monitoring ability of the board of directors.

This study investigates whether corporate governance initiatives in South Africa that relate to the monitoring ability of the non-executive directors on the board of small and medium companies have improved earnings quality by adopting conservative accounting practices.

There is a general consensus among researchers that the concept of corporate governance was born out of the agency problem. The agency problem is referred to as the conflict of interests between shareholders and managers that arises due to the separation of the ownership of the company and the control of the company (Jensen & Meckling 1976). It is the role of the board of directors to monitor and control the behaviour of managers, and in that way protects the interests of shareholders (Fama & Jensen 1983; Fama 1980). This notion of control and monitoring was also captured in the second King Report on Corporate Governance (King II), which confirms that the board of directors is accountable for the performance and affairs of the company (King 2002). Ahmed, Hossain and Adams (2006) argue that the effectiveness of corporate governance is influenced by the size and the structure of the board, which possesses the ability to reduce agency conflicts.

Bushman, Chen, Engel and Smith (2004) state that the board of directors needs to understand the how and why of changes in equity value to enable them to fulfil their responsibilities. Timeliness of earnings and conservatism are market-based attributes of earnings quality that are based on returns (share prices), which provide information about changes in equity value (Gaio 2010). These two attributes of

earnings also play an important role in corporate governance as they facilitate the monitoring of managers.

The interaction between the agency theory, corporate governance and earnings quality is illustrated in Figure 1 below.
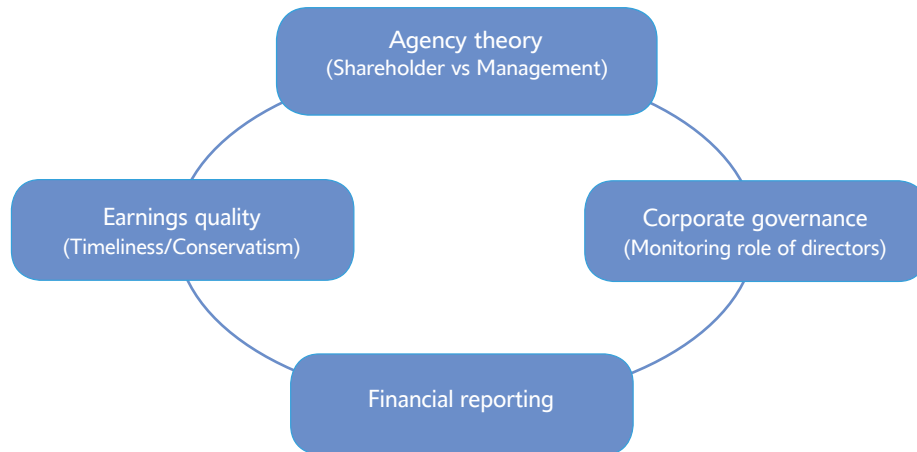
Figure 1: Interaction between the agency theory, corporate governance and earnings quality

This is one of a few studies that have explicitly investigated the relation between the monitoring ability of the board and earnings quality, more specifically timeliness/ conservatism. The study contributes empirical evidence from a new setting (small and medium-sized companies in South Africa) to the existing literature on the relationship between corporate governance and earnings quality. The findings can be useful to investors, managers and regulators, in view of the fact that they have implications for all of them.

The study is structured as follows: first a literature study of the agency theory, corporate governance in South Africa, board of directors, and earnings quality is presented. Then a review of international studies regarding the relationship between corporate governance and financial reporting is given, which is followed by an analysis of the sample and data. A discussion of the methodology, which includes the hypothesis development, research model and method of analysis, is then presented. The results and an interpretation of the findings are discussed next, followed by a conclusion, the limitations of the study and recommendations for future research.

Literature study

Agency theory

The principal-agent paradigm dates back to the nineteenth century. Berle and Means (1932) recognised that modern companies suffer if the ownership of a company is separated from its control due to different and sometimes opposing interests of the owners and the managers who control the company on behalf of the owners. Agency theory suggests that if the principal (owner) delegates the decision-making power to the agent (manager), inefficiencies can be caused in a company because managers will not necessarily work in the interest of the company, but rather in their own interest, which can be disadvantageous to the owner (Jensen & Meckling 1976; Watts & Zimmerman 1978; Deegan 2009). However, Fama (1980) comments that the separation of ownership and control is an efficient form of management. The board of directors can solve the agency problem if they separate the management and control aspects of decision-making. The decision-making function is delegated to the managers but the board retains ultimate control that includes the right to monitor and ratify the decisions made by management (Fama 1980; Fama & Jensen 1983).

Corporate governance in South Africa

In accordance with the agency theory, corporate governance principles were developed to address the concerns of investors about the excessive power in the hands of management (King 2002). Corporate governance accordingly is described as the "system by which companies are directed and controlled" (King 1994; Cadbury Committee 1992). The King reports on Corporate Governance are at the heart of corporate governance in South Africa (Le Roux 2010).

The first King Report on Corporate Governance (King I) was released in 1994, and focused on the relationship between shareholders and the directors of a company. King I set guidelines for high-quality corporate governance systems, to bring about equilibrium between management, accountability and the interests of various stakeholders (King 1994).

Since 1994, various local and international developments, such as the transformation of the South African society, South Africa's increasing participation in the global economy, and pressures from international standards and institutional investors (Rossouw, Van der Watt & Malan 2002) have necessitated the revision of corporate governance practices in South Africa. As a result, King II was issued in 2002 and is based on seven primary characteristics (pillars) of good governance

against which all corporate decisions should be assessed. The pillars identified are: discipline; transparency; independence; accountability; responsibility; fairness; and social responsibility (King 2002).

King III was released in 2009, due to the implementation of the new Companies Act, No. 71 of 2008, in South Africa and changes in international governance trends (King 2009). King III strengthens previous requirements regarding the composition and role of the board of directors.

South Africa achieved first place (among 141 other countries) for strength in accounting and auditing standards in 2010 and 2011 in the Global Competitiveness Report issued by the World Economic Forum (WEF 2010). Furthermore, the efficacy of corporate boards ranked sixth and third in 2010 and 2011, respectively (JSE 2011a).

Board of directors

Numerous studies articulated that the responsibility for corporate governance lies with the board of directors. The management of a company should be monitored by the board of directors on behalf of the shareholders. Managers should be accountable to the board, which, in turn, should be accountable to the shareholders, whose task it is to appoint the board of directors (Abor & Adjasi 2007; Nordberg 2007; Maharaj 2009; Monks & Minow 2004).

A company's board of directors can be structured in many different ways so as to meet the needs of the organisation, however, these structures can reflect two competing viewpoints (Petra 2007). On the one hand, companies will structure their board of directors to reduce the agency problem (Fama & Jensen 1983; Fama 1980), by appointing non-executive directors that make a positive contribution with regard to the ability to monitor management's behaviour and the interest of shareholders (Muwandi 2010; Ahmed et al. 2006; García Osma & Noguer 2007; Petra 2007). On the other hand, some structures will allow for management to control the board (Mace 1971) because management has more inside information and a better understanding of the needs of the company than non-executive directors (Petra 2007). Non-executive directors are appointed to contribute industry knowledge, experience and, especially, objectivity and independence to the board (PricewaterhouseCoopers (PWC) 2006).

As mentioned previously, one of the key changes introduced by King III relates to the composition of the board. Table 1 provides a comparison of the King II and King III requirements relating to the composition of the board.

Table 1: Table 1: Board composition – a comparison of King II and King III

King II	King III
"The board should comprise a balance of executive and non-executive directors, *preferably* with a majority of non-executive directors of who sufficient should be independent of management," (King 2002).	"The board should comprise a balance of executive and non-executive directors, with a majority of non-executive directors. The majority of non-executive directors should preferably be independent," (King 2009).

Although the requirements seem to be similar, the change in wording in King II of "…*preferably* with a majority of non-executive directors …" to "… a majority of non-executive directors…" in King III, takes away the flexibility in King II regarding the percentage of non-executive directors on the board. Consequently, King III does not allow for any flexibility, but requires the board to have of a higher ratio of non-executive directors relative to executive directors. This change is likely to affect the oversight role and monitoring ability of the board of directors.

Beekes, Pope and Young (2004) state that if non-executive directors understand the company's financial reporting system and have satisfactory incentives to monitor, they will be efficient monitors. Peasnell, Pope and Young (2005) studied the relationship between board monitoring and earnings management for US and UK companies respectively, and both of these studies demonstrated a positive link between effective monitoring and the presence of non-executive directors on the board. Petra (2005) cited five studies finding that non-executive directors do strengthen corporate boards that employ audit, compensation and nominating committees, which have various monitoring responsibilities.

Traditionally, the non-executive directors of South African companies are comprised of executive directors who have either retired or resigned from the company or were appointed on the basis of their reputation. This raises the question of whether these directors can be regarded as truly independent (Seegers 2008). Dyer (2011), furthermore, reports the view of company directors who believe that it is likely that inexperienced non-executive directors may become over-involved in the management of a company's activities in their effort to contribute. This can impact negatively on their monitoring ability. The lack of incentives and multiple directorships can also weaken the monitoring role of the non-executive director. The remuneration of South African non-executive directors is significantly lower than their international counterparts. The problematic issue of remuneration, together with increased accountability and reputational risk, gives rise to the concern about multiple directorships. Seegers (2012) reports an increase in the number of non-executive directors who, besides their current positions, take on additional positions in other companies.

To enable the directors to discharge their duties and make a meaningful contribution, management has to provide them with accurate, relevant and timely information (Wixley & Everingham 2010). These are all attributes of earnings quality, which is discussed next.

Earnings quality

Despite the large body of literature on earnings quality to date, there is no uniform definition of earnings quality yet. The concept of earnings quality has attracted various definitions over time. Earnings quality is the point where reported earnings realistically correspond to the amount that can be used during a period, while leaving the company equally well off at the beginning and the end of the period (Schipper & Vincent 2003). Earnings quality is defined by Mikhail, Walther and Willis (2003) as the degree to which past earnings of a company is related to its future cash flows, while Hodge (2003) identifies earnings quality as the variation between true earnings and reported earnings. Dechow and Schrand (2004) describe earnings quality from an analyst's viewpoint and state that earnings are of a high quality if they can be useful to determine a company's value; truthfully represent the current operating performance of a company; and are a reliable pointer of the company's future operating performance.

However, all of these definitions highlight only two important aspects of earnings quality, namely relevance and reliability that are consistent with the objective of financial reporting, that is to provide decision-makers with useful information that is relevant and reliable (International Accounting Standards Board (IASB), 2010). Accordingly, Dechow, Ge and Schrand (2010) are of the view that higher quality earnings are more useful for decision-makers because they provide further information of a company's financial performance.

In addition, there is consensus among many researchers about the attributes of earnings quality. The seven attributes generally are divided into two groups (Francis, LaFond, Olsson & Schipper 2004; Gaio 2010). The first group consists of accounting-based attributes and includes accruals quality, earnings persistence, earnings predictability and earnings smoothness. The second group is the market-based attributes that include value relevance, timeliness and conservatism. This study focuses on the second group of attributes to measure earnings quality. These market attributes assume that the function of earnings is to reflect the change in the market value of equity. Timeliness and conservatism are used to determine how close earnings (accounting income) are to share returns (economic income). The closer earnings are to share returns, the higher the earnings quality (Gaio 2010). Ball,

Kothari and Robin (2000) describe timeliness of earnings as the degree to which economic income (gains and losses) is reflected in accounting income. Conservatism, a prudent reaction to uncertainty (García Lara, García Osma & Penalva 2007), is interpreted as earnings conservatism and is measured by the timely recognition of losses (bad news) relative to gains (good news), also referred to as asymmetric timeliness of earnings (Basu 1997).

The relationship between corporate governance and financial reporting

An extensive amount of research has been done on the relationship between corporate governance and financial reporting, however, literature on the direct link between the monitoring ability of the board and earnings quality is limited to a few studies. Nearly all the studies that used conservatism to determine the quality of earnings applied the Basu (1997) reverse regression of earnings on returns to measure conservatism. In a limited number of studies where alternative models, such as accrual-based or book-to-market ratio proxies were used to measure conservatism, the Basu model was applied in a sensitivity analysis or robustness check. All of these models applied, reached similar conclusions.

The link between accounting conservatism/timeliness and the monitoring ability of the board was investigated for companies in the UK from 1993 to 1995 and companies in Greece from 2000 to 2004. Results from these studies lead to homogeneous conclusions and provided evidence that companies with a higher proportion of non-executive directors on the board are more conservative in reporting bad news, however, there is little evidence to support conservative recognition of good news (Beekes et al. 2004; Dimitropoulos & Asteriou 2010). These studies by Beekes et al. (2004) and Dimitropoulos and Asteriou (2010) used the Basu (1997) model to measure conservatism. Furthermore, both of these studies only include listed companies with December financial year-ends, and some companies were only included for one year of the sample period.

A number of studies examined the effect of board independence on earnings quality and used discretionary accruals, a measure of earnings management as a proxy for earnings quality. Ianniello (2015) studied a sample of industrial, commercial and service companies listed on the Italian Stock Market during the period 2007 to 2010 and did not find evidence that different levels of independent directors on the board has a significant impact on earnings quality. Contrary to the findings of Ianniello (2015) evidence of a negative relation between board independence and earnings management (positive influence on conservative reporting and earnings quality)

was found for companies in Latin America, Portugal and Nigeria. Non-financial companies listed in Latin America from 2006 to 2009 and Portuguese companies listed on the main market of Euronext Lisbon over a period of eight years, 2003 to 2010, were reviewed (González & García-Meca 2014; Alves 2014). Suleiman (2014) investigated food and beverages companies listed on the Nigerian Stock Exchange within the period 2003 to 2010.

Ebaid (2013) used a 2 x 2 experimental design with a strong board of directors versus a weak board of directors to test whether corporate governance mechanisms promoted by the Egypt Code of Corporate Governance are effective in enhancing investors' perceptions of earnings quality. The findings of the study revealed that investors' perceptions of earnings quality are higher in the presence of a strong board of directors comprising of a majority of independent directors.

An empirical analysis on accounting conservatism and a board of directors' characteristics was performed for Spanish companies from 1997 to 2002, and US companies between 1999 and 2001. These studies measured the quality of a company's governance by using a corporate governance index/score. This index/score was determined by using a number of board characteristics, which included the proportion of non-executive directors on the board. Evidence confirmed that companies with strong boards apply conservative accounting techniques (García Lara et al. 2007; Ahmed & Duellman 2007).

Sample and data

The sample consisted of 48 South African companies listed on the AltX for the years 2008 to 2011. The AltX is a division of the Johannesburg Securities Exchange (JSE) that was launched in 2003, following the release of King II in 2002. The AltX comprised small and medium-sized, high-growth companies that are geared towards attracting new and growing businesses, looking to raise funds, make acquisitions, and mature in such a way as to achieve the ultimate goal – a listing on the JSE's main board (Scholtz & Smit 2012).

Towards the end of 2010, seven years after the AltX opened for business in October 2003, 13 companies had already transferred successfully to the main board and another two transferred successfully during 2011 (JSE 2010; JSE 2011b). Given a few exceptions due to different listing requirements, AltX companies also have to comply with governance procedures as required by the King reports. One of these exceptions relates to the percentage of non-executive directors serving on the board, which impacts on the monitoring ability of the board. The board should consist of at least 25% non-executive directors to obtain a listing on the AltX (JSE 2012). As these

companies develop towards a listing on the main board of the JSE, the percentage of non-executive directors on the board would also have to increase to comply with King II and King III, which require the majority of the directors to be non-executive (King 2002; King 2009). The percentage of non-executive directors on the board of the companies in the sample increased from 42% in 2008 to 49% in 2011.

The initial sample that included all companies listed on the AltX at the end of February 2012 consisted of 62 companies. From these companies the following were excluded: six companies that were not South African companies; four companies that had been listed for fewer than three years, due to listing dates between 2009 and 2011; and four companies that did not have sufficient data available.

The sample period (companies with reporting periods from 1 January 2008 to 31 December 2011) was determined with reference to the reporting period based on the listing dates of these companies. Only 42% of the companies included in the sample were listed prior to 2007. These were represented by eight companies transferred from the main board of the JSE in 2004, and 12 companies listed between 2005 and 2006. New listings on the AltX that boomed during 2007 and 2008 comprise 29 companies in the sample. It is important to note that if a company listed during 2007, the first 12-month reporting period would end during 2008. Figure 2 shows the annual distribution (based on a company's reporting period) of the 175 observations included in the regression analysis.
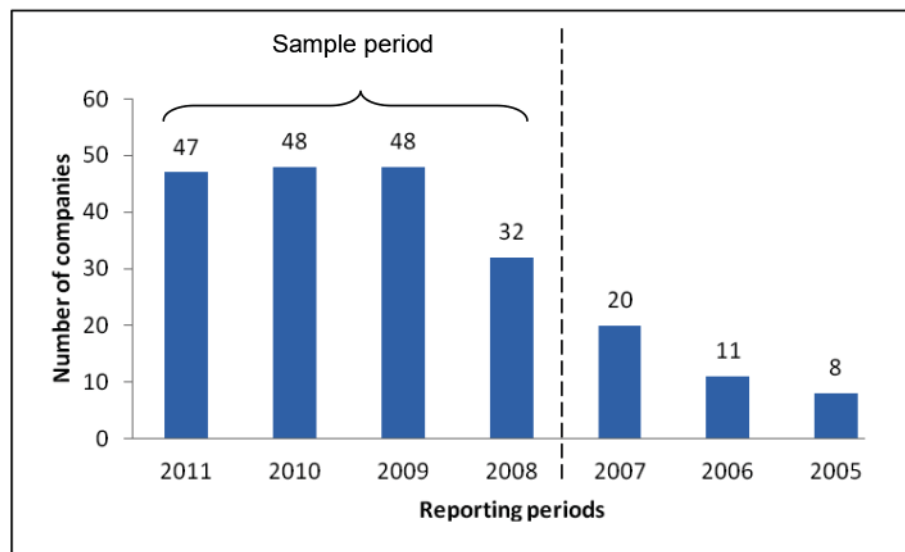
Figure 2: Annual distributions of observations

Data for the 2011 reporting period were not available for one of the companies included in the sample. Data from the JSE were used to construct the sample and sample period (JSE). All other data used were collected from McGregor BFA that is maintained and supported by Media 24.

Methodology

Hypothesis development

Evidence from prior studies that examined the direct link between the monitoring ability of the board and earnings quality showed that companies with a higher representation of non-executive directors on the board are more conservative and report bad news on a timelier basis that results in higher-earnings quality. However, the sample structure of these studies consisted of large companies that were already listed on the main board in their specific countries. The sample structure of this study consists of small to medium-sized companies that are listed on the AltX a division of the main board (JSE) in South Africa. The focus of these companies is to grow their businesses and to raise capital that can result in a lack of conservative accounting practices and asymmetric timeliness of earnings. Even so, the hypothesis stated in the alternative form is as follows:

H1: There is a relationship between the different levels of non-executive directors on the board and conservative accounting practices (asymmetric timeliness of earnings) that will improve earnings quality.

Model and method of analysis

Basu's (1997) seminal paper on the conservatism principle and the asymmetric timeliness of earnings proposed a statistical technique to explore the effects of the conservatism principle on reported financial statements. The standard Basu (1997) model regresses earnings on returns and incorporates an indicator variable (NEG) to differentiate between positive and negative returns. This model was adjusted to include a year dummy to control for fixed-year effects and possible omitted variables, and firm control variables for size, risk and growth, which were documented to be related with earnings quality (Dimitropoulos & Asteriou 2010; Gaio 2010; Petra 2007; Ahmed & Duellman 2007; Beekes et al. 2004). Model 1 that was used to test the asymmetric timeliness of earnings is estimated as follows:

$$EPSjt/Pt\text{-}1 = \beta_0 + \beta_1 RETjt + \beta_2 NEGjt + \beta_3 RETjt*NEGjt + \beta_4 SIZEjt + \beta_5 RISKjt + \beta_6 GROWTHjt + year\ dummy + \beta$$

where *EPS/P* is the earnings per share scaled by the share price at the beginning of the period. The proxy for good news, *RET* is the twelve-month returns for the fiscal year. *NEG,* the indicator variable for negative returns is interacted with RET to proxy for bad news, *NEG* is coded 1 if returns are negative and 0 otherwise. *SIZE* is firm size measured as market value of equity, *RISK* is the financial leverage of the company, and *GROWTH* is market-to-book value of equity.

To best achieve the objective of the current study, Model 1 was extended to focus on the monitoring ability of the board. A dichotomous variable (NEX) was included to proxy for the percentage of non-executive directors on the board. NEX was interacted with both the bad news proxy and the good news proxy to estimate Model 2 below:

$$\text{EPS}jt/\text{P}t\text{-}1 = \beta_0 + \beta_1\text{RET}jt + \beta_2\text{NEG}jt + \beta_3\text{RET}jt*\text{NEG}jt + \beta_4\text{SIZE}jt + \beta_5\text{RISK}jt + \beta_6\text{GROWTH}jt + \beta_7\text{NEX}jt + \beta_8\text{RET}jt*\text{NEG}jt*\text{NEX}jt + \beta_9\text{RET}jt*\text{NEX}jt + \text{year dummy} + \varepsilon$$

where *NEX* is coded 1 if the percentage of non-executive directors on the board is above the sample median and 0 otherwise, and all other variables are as previously stated.

The definitions of all variables used in the regression models are presented in Table 2 below:

Conservative accounting is based on the idea that earnings will be more sensitive to bad news relative to good news, thus earnings will reflect bad news faster than good news (Basu 1997).

In Model 1, a positive and significant $\beta_1\text{RET}$ and $\beta_3(\text{RET}*\text{NEG})$ will demonstrate conservative accounting practices and asymmetric timeliness of earnings that will increase earnings quality. In Model 2, $\beta_3(\text{RET}*\text{NEG})$ can be seen as the reaction of earnings to bad news where NEX equals zero. The marginal effect for companies where NEX equals one is captured by $\beta_8(\text{RET}*\text{NEG}*\text{NEX})$. A significant positive coefficient for β_8 will provide evidence that earnings quality has improved as a result of the monitoring ability of a higher percentage of non-executive directors on the board. $\beta_1\text{RET}$ captures the timeliness of good news where NEX equals zero, while $\beta_9\text{RET}*\text{NEX}$ represents the marginal timeliness effect for companies where NEX equals one. If β_9 results in a significant negative coefficient, β_1 will be significantly larger than $(\beta_1 + \beta_9)$, and it will be confirmed that companies with fewer non-executive directors on the board are expected to be less conservative and more aggressive in the recognition of good news.

Table 2: Definitions of variables

Variable	Definition
Earnings per share (EPS)	Profit attributable to ordinary shareholders/weighted- average number of shares.
Price (P)	JSE (closing) share price at company financial year-end.
Return (RET)	The twelve-month return is calculated by using the JSE (closing) share price adjusted for corporate actions. The following corporate actions are included in the calculation: cash dividends, capitalisation issues, consolidations, capital payments, special dividends, interest payments, non-cash dividends, subdivisions, rights issues and unbundlings.
NEG	Indicator variable for negative returns.
Size of the board (BSIZE)	Number of directors on the board.
NNEX	Number of non-executive directors on the board.
NEX	Dichotomous variable that proxy for the percentage of non-executive directors on the board.
PERC	Continuous variable that proxy for the percentage of non-executive directors on the board. The percentage is calculated as the number of non-executive directors on the board/the size of the board.
Market value of equity (SIZE)	Natural log of market capitalisation, calculated as JSE (closing) share price at company financial year-end x number of ordinary shares in issue at company financial year-end.
Leverage (RISK)	Ratio of total debt to total assets.
Market-to-book value of equity (GROWTH)	Ratio of market capitalisation to ordinary shareholders' interest.

Results

Descriptive statistics

According to Table 3, the negative mean earnings per share/share price of 11% (-0.109) and the negative mean return of 17% (-17.338) might be attributable to the decline of the financial markets from 2008 to 2010, which denote 75% of the sample period. The negative mean return indicates that the companies in the sample incurred losses of 17% (-17.338) during the sample period. As indicated by BSIZE in Table 3, the board of AltX companies comprises a median of seven directors of which only three are non-executive directors (NNEX). Since only 45% (45.323) of the directors are non-executive (as indicated by the mean PERC in Table 3), it was expected that these companies might experience more agency problems that

could impact negatively on earnings quality in comparison with companies where the board comprises a majority of non-executive directors. The mean for the firm control variables (SIZE, RISK and GROWTH) in Table 3 conform to the objective of companies listed on the AltX, which is to raise funds and grow their businesses. The RISK statistics in Table 3 indicate that the companies are highly leveraged, since total debt to assets equals 58% (0.576). In addition, despite the financial crisis, the market value of equity for these companies almost equals their book value (market capitalisation to ordinary shareholders' interest ratio of 1.3:1), and can be interpreted as growth of the company's business as indicated by a GROWTH statistic of 1.273 in Table 3.

Table 3: Descriptive statistics

Variables	Minimum	Maximum	Mean	Median	Std. Deviation
EPS/P	-1.94	0.73	-0.109	0.032	0.4185
RET %	-85.14	169.87	-17.338	.-24.295	49.0705
NEG	0	1	0.713	1	0.4538
BSIZE	3	15	7.230	7	2.1729
NNEX	0	9	3.297	3	1.5433
PERC	0	80	45.323	43.651	14.7560
NEX	0	1	0.500	0.5	0.5014
SIZE	16.04	21.32	18.351	18.275	1.0943
RISK	0.04	1.46	0.566	0.576	0.2632
GROWTH	-0.29	7.74	1.273	.0.912	1.2283
Number of observations	174	174	174	174	174

Correlation coefficients

Table 4 presents the Pearson/(Spearman) correlation coefficients among the sample variables for the full sample (174 observations). Earnings per share/share price (EPS/SP) are significantly and positively correlated with returns (RET) and the size of the company (SIZE), as indicated by correlations of 0.234/(0.330) and 0.242/(0.284) respectively in Table 4. However, as indicated in Table 4 there is a negative and significant correlation of -0.379/(-0.437) between EPS/SP and companies that are highly leveraged (RISK). Returns are negatively affected by companies with a

high debt-to-asset ratio as indicated by RISK in Table 4 (significant and negative correlation of -0.188/(-0.217) between RET and RISK). In Table 4 only Spearman shows a significant and positive correlation of 0.226 between RET and GROWTH. This is an indication that companies with high-growth opportunities have a positive impact on returns. Table 4 indicates that the number of non-executives (NNEX) on the board is significant and positively correlated with the size of the board (BSIZE), correlation of 0.628/(0.652) and the percentage of non-executive directors on the board (PERC), correlation of 0.775/(0.779). According to Table 4, SIZE is significant and positively correlated with BSIZE, correlation of 0.261/(0.218) and NNEX, correlation of 0.157/(0.056). Table 4 indicates that the composition of the board, nevertheless, seems to be unrelated with the leverage (non-significant correlation of 0.035/(0.017) between PERC and RISK) and growth opportunities (non-significant correlation of 0.088/(0.122) between PERC and GROWTH) of the companies. There are indications in Table 4 that smaller companies are more leveraged (significant and negative correlation of -0.153/(-0.208) between SIZE and RISK) and have fewer growth opportunities (significant and positive correlation of 0.206/(0.156) between SIZE and GROWTH).

Table 4: Correlation coefficients

	EPS/SP	RET	BSIZE	NNEX	PERC	SIZE	RISK	GROWTH
EPS/SP	1	.330**	-.096	-.126	-.102	.284**	-.437**	-.098
RET	.234**	1	-.054	.019	.051	.139	-.217**	.226**
BSIZE	-.038	-.045	1	.652**	.082	.218**	.081	.045
NNEX	-.116	-.017	.628**	1	.779**	.056	.071	.119
PERC	-.088	.021	.059	.775**	1	-.097	.017	.122
SIZE	.242**	.133	.261**	.157*	-.047	1	-.208**	.156*
RISK	-.379**	-.188*	.129	.134	.035	-.153*	1	.063
GROWTH	-.005	.132	.062	.137	.088	.206**	.148	1

Notes:

The Pearson correlation is indicated below the diagonal line and the Spearman correlation is indicated above the diagonal line.

** Correlation is significant at the 0.01 level (2-tailed).

 * Correlation is significant at the 0.05 level (2-tailed).

Definitions of the variables are presented in Table 2.

Empirical evidence from regression models

According to Table 5, the intercept for both models are negative and insignificant. The negative intercept indicates that there was no good news from the prior period that was postponed and recognised in the current period. This could be a result of non-conservative accounting practices applied by management because their main focus was to grow the business, the objective of AltX companies. Model 1 in Table 5 is the standard Basu (1997) model that examines the asymmetric timeliness of earnings (good news vs. bad news). According to Model 1 in Table 5 the coefficients for the key variables β_1(RET) of 0.001 and β_3(RET*NEG) of -0.001 are statistically insignificant. This finding indicates that earnings do not reflect bad news more quickly than good news and is not supportive of conservative accounting practices. It is, therefore, more likely that the managers of these companies will not recognise bad news on a timely basis, and that they will also have a natural tendency to incorporate good news on a timely basis due to their opportunistic behaviour.

Model 2 in Table 5 included an additional variable to test whether a higher percentage of non-executive directors on the board will improve earnings quality. According to Model 2 in Table 5 the coefficient of 0.001 for β_8(RET*NEG*NEX) was positive, as expected, but not statistically significant. Thus, there is no evidence that companies with a higher percentage of non-executive directors on the board are more conservative and recognise bad news on a timelier basis. Consequently, there is no improvement in earnings quality as a result of the monitoring ability of the board. According to Model 2 in Table 5 the sensitivity of earnings to good news is represented by variables β_1(RET), positive coefficient of 0.001 and β_9(RET*NEX)(-), positive coefficient of 0.000, both of which are statistically insignificant. Therefore, no confirmation could be obtained that companies with a higher percentage of non-executive directors on the board adopt conservative accounting practices, which indicates that they are less aggressive in the recognition of good news that can lead to an improvement in earnings quality.

Consistent with the significant negative correlation of -0.379 (Pearson) and -0.437 (Spearman) between EPS/SP and RISK, as indicated in Table 4, the negative and significant coefficient of -0.457 (t-statistic: -4.080) for β_5(RISK) in Table 5 explains that the earnings of companies are negatively affected by an increase in the debt-to-assets ratio.

Table 5: Results from the regression analysis

	Model 1	Model 2
Intercept (?)	-.556 (-1.127)	-.621 (-1.242)
RET (+)	.001 (1.324)	.001 (0.843)
NEG (?)	-.227 *(-2.398)	-.224 *(-2.320)
RET*NEG (+)	-.001 (0.683)	-.002 (-0.719)
NEX (?)		.072 (0.774)
RET*NEG*NEX (+)		.001 (0.374)
RET*NEX (-)		.000 (0.189)
SIZE (?)	.036 (1.378)	.036 (1.391)
RISK (?)	-.457 **(-4.182)	-.457 **(-4.080)
GROWTH (?)	-.039 (-1.575)	-.038 (-1.505)
Adj R^2	0.311	0.303
F-value	9.675 (p<0.001)	7.274 (p<0.001)
Number of observations	174	174

Notes:

The sample consisted of 48 South African companies listed on the AltX for the period 2008 to 2011.

The t-statistic is reported in parenthesis and is two-tailed.

** Significant at the 0.01 level.

  * Significant at the 0.05 level.

The predicted sign of the coefficient is in () after the variable

Model 1: $EPS_{jt}/P_{t-1} = \beta_0 + \beta_1 RET_{jt} + \beta_2 NEG_{jt} + \beta_3 RET_{jt}*NEG_{jt} + \beta_4 SIZE_{jt} + \beta_5 RISK_{jt} + \beta_6 GROWTH_{jt}$ + year dummy + β

Model 2: $EPS_{jt}/P_{t-1} = \beta_0 + \beta_1 RET_{jt} + \beta_2 NEG_{jt} + \beta_3 RET_{jt}*NEG_{jt} + \beta_4 SIZE_{jt} + \beta_5 RISK_{jt} + \beta_6 GROWTH_{jt} + \beta_7 NEX_{jt} + \beta_8 RET_{jt}*NEG_{jt}*NEX_{jt} + \beta_9 RET_{jt}*NEX_{jt}$ + year dummy + β

Definitions of the variables are presented in Table 2.

Robustness test

The robustness test replaced the dichotomous variable (NEX) with a continuous variable (PERC). This test provided assurance that the results in the primary test are not due to the dichotomous variable (NEX) that was used to split the sample into two groups. In accordance with the results from Model 2 in Table 5, the untabulated results of the robustness test also show a negative and statistically insignificant intercept. A positive and insignificant β_8(RET*NEG*NEX) was reported, therefore, there is no evidence of timely recognition of bad news. As expected, a positive β_1(RET) and negative β_9(RET*NEX) was reported but both are statistically insignificant and do not provide evidence of conservative recognition of good news.

Conclusion

In general, the boards of small and medium companies in South Africa that are listed on the AltX focus on growing the companies' business and raising capital. It was found that these boards are not inclined to adopt conservative accounting practices that will result in the asymmetric timeliness of earnings. Furthermore, the quality of reported earnings has not improved as a result of the monitoring ability of a higher percentage of non-executive directors on the board. Bad news is not reflected in earnings on a timelier basis if there is an increase in the representation of non-executive directors on the board. This finding is in contrast with evidence from prior studies of larger listed companies where the results demonstrated that companies with a higher percentage of non-executive directors on the board are more conservative in reporting bad news (Beekes et al. 2004; Dimitropoulos & Asteriou 2010). Good news is not reflected in earnings on a less timely basis if there is an increase in the representation of non-executive directors on the board. This finding, however, supports the results reported by Beekes et al. (2004) and Dimitropoulos and Asteriou (2010), who also found little evidence to support the conservative recognition of good news for larger listed companies.

It can thus be argued that there is no relationship between different levels of non-executive directors on the boards of AltX companies and conservative accounting practices that will improve earnings quality.

Limitations and recommendations

Due to data constraints this study only focused on the market-based attributes of earnings quality that include timeliness and conservatism and can be extended to focus on accounting-based attributes of earnings quality (discretionary accruals). In

addition, this study was only focused on the monitoring ability of the non-executive directors of the board. It also did not differentiate between non-executive directors and independent non-executive directors due to non-disclosure of the split between non-executive directors and independent non-executive directors in the annual reports of almost 50% of the companies prior to the 2011 reporting period. Future research could be conducted on other attributes of board composition that can also influence the quality of earnings such as characteristics of chairpersons, multiple directorships and board ownership.

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