

CORPORATE GOVERNANCE AND LEVEL OF INTERNET REPORTING IN KENYA¹

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Abstract: This paper reports the results of an investigation of the association between corporate governance mechanisms and level of information disclosed by Kenyan listed companies on their corporate websites. Using data extracted from the web sites of 48 Nairobi Stock Exchange (NSE) listed companies over a two year period (96 firm years) and the Internet Business Reporting Quality (IBRQ) index to quantify the level of internet reporting practices, the study found that the level of information is above average (68.2%). Ordinary Least Squares (OLS) multiple regression results indicate that there is a significant association between corporate governance mechanism (ownership structure, independent audit committee and financial expertise) and the level of information on the corporate websites. However, no significant association is found in respect of board composition. Among the control variables (company size and profitability) only profitability is significantly associated with the level of information. The results have important implications for policy makers in Kenya in their efforts to improve level of information available on corporate websites.

Key Words: Corporate governance, Internet financial reporting, Nairobi Stock Exchange, Kenya

1. Introduction and motivation

The growing use of the internet provides companies with a new and unique platform that encourages flexible presentation and allows for immediate, broad and inexpensive communication with investors (Ettredge et al., 2001; Kelton and Yang, 2008). This has given companies incentives to establish websites to advertise their products; project a global reputation; showcases their products and provide investor an interaction platform (Lymer, 1999; Ettredge et al., 2002). According to Xiao et al. (2004) Internet financial reporting (IFR) has overtaken printed reports as the preferred medium for external reporting by companies. However notwithstanding the importance of the internet as a platform to present company information to meet the needs of different stakeholders, there is great variance in the content and the composition of that information (El-Masry and Abdelsalam, 2008; Kelton and Yang, 2008).

Extant empirical evidence on the determinants of IFR practices are focused on developed countries e.g., Booker and Galbreath (1997) and Gowthorpe and Flynn (1997) in the USA, Hussey and Sowinska (1999) and Craven and Marston (1999) in the UK and Marston and Polei (2004) in Germany. However, there is a dearth of empirical research studies on emerging economies in general (e.g. Zhang et al., 2007; AbuGhazaleh et al., 2012) and China (Xiao et al., 2004; Zhang et al., 2007) and specifically on the African continent (Barako, 2006; Zoysa and Rudkin 2010). The results of studies from developed and developing economies are mixed in respect of what corporate governance mechanisms are associated with IFR. Moreover, the findings from developed economies may not be generalizable to different countries due to the large differences in political, regulatory, cultural, technological, economic, and social factors between the developed and developing countries (Waweru, Gelinas and Uliana, 2009, Werbin and Porporato, 2012) that may require different types of reporting systems. Also, in many

developing countries, including Kenya, the ownership of companies is highly concentrated such that the need for extensive reporting of information is minimal because large shareholders have access to management. Furthermore, many developing countries' internet capabilities are limited (see Tauringana and Mangena, 2012). It is therefore necessary to investigate the association between corporate governance mechanism and IFR level in different settings.

The objective of this research is to investigate the level of IFR by companies listed on the Nairobi Stock Exchange (NSE), in Kenya. Specifically, we examine the association between corporate governance mechanisms and IFR level by 48 NSE listed companies over a two year period (96 firm years). We use Internet Business Reporting Level (IBRQ) index to quantify the level of IFR practices. Ordinary Least Squares (OLS) multiple regression is employed to determine the association between four corporate governance mechanisms (ownership structure, board composition, audit committee independence, financial expertise) and level of IFR controlling for company specific characteristics (company size and profitability).

The choice of Kenya is motivated by several factors. First, a study by the World Bank (2001) conducted in Kenya observed that weaknesses in corporate governance practices, lack of pressure from the users of financial statements for high-level information, and the general absence of transparency in the corporate sector, pervade the corporate financial reporting regime in Kenya. It is thus important to investigate if corporate governance mechanisms can alleviate some of the weaknesses in IFR. Second, over the last decade, the Kenyan economy has been experiencing major changes. The capital market has expanded to reach a market capitalisation of over one trillion shillings (about thirteen million dollars) (NSE, 2010). Institutional investors, most of who are from other countries have become major players at the Nairobi Stock Exchange and corporate governance guidelines that were issued by the Capital Market Authority (CMA) in

2002 were made mandatory for all companies listed on the NSE. Third, Kenya has also been advancing very fast on the technological front with its vision to being the regions technology hub. The fibre optic cables and rural electrification are expected to make internet accessible to all parts of the country cheaply. CMA (2002) guidelines and the Nairobi Securities Exchange recommend that public listed companies should establish and encourage the use of corporate web site by shareholders to enable communication and interaction between shareholders and the company. The Companies Act is also under review to make it mandatory for listed companies to disclose their financial reports via their corporate websites and this awareness may have increased the level of internet reporting by Kenyan listed companies.

The results of the study suggest that the level IFR in Kenya is about 68.2%, which is considered above average. The OLS multiple regression results indicate that corporate governance mechanism (ownership structure, independent audit committee and financial expertise) are associated with level of IFR in Kenya. However, the other corporate governance mechanism (board composition) is not significantly associated with level of IFR. Among the control variables (company size and profitability) only profitability is significantly associated with IFR. The results of this study are important to accounting regulators in Kenya, in the determination of whether there is need to regulate financial information disclosure on the internet. The study is also important to investors in Kenya, who must interpret financial statement numbers reported in the corporate websites while making investment decisions. Furthermore, the study contributes to our understanding of how corporate governance influences financial reporting in developing economies, specifically Kenya.

The remainder of this paper is organised as follows: Section 2 reviews prior research and develops the hypotheses while Section 3 outlines the research design. In Section 4 we present the results while the summary and conclusion is presented in Section 5.

2. Literature Review and Hypotheses Development

2.1 Corporate governance and Reporting

Most national codes of corporate governance seek to protect stakeholder rights, support the concept of independence and a balance of power in the boardroom, and recognize the importance of transparency and disclosure. The International Chamber of Commerce (I.C.C, 2005) recognizes that high-quality corporate governance norms are critical to high-quality financial reporting. Studies by Byard et al. (2006); Jianga et al. (2008) concluded that the quality reported information increases with the quality of corporate governance. They also found that higher levels of corporate governance are associated with lower absolute discretionary accruals and higher quality of earnings. This implies that firms with weak corporate governance are more likely to manage earnings in order to meet or beat analyst forecasts and this would decrease the quality of the information reported.

The wave of corporate corruption scandals has highlighted the importance of good corporate governance (Standard and Poor's, 2003). The failure of high profile companies in the USA, UK and other parts of the world has largely been attributed to failures in the corporate governance (IFAC, 2003; Mardjono, 2005). In the U.S.A an increasing number earnings restatements by publicly traded companies coupled with allegations of financial statements fraud and lack of responsible corporate governance of high profile companies (for example Enron, Global crossing, and World com) has sharpened the ever increasing attention on corporate

governance in general and quality of corporate reporting. The fall of the above companies raised concerns regarding the lack of vigilant oversight functions of their boards of directors and audit committees in effectively overseeing financial reporting process and auditing functions (Razaee, 2003). Various commissions were formed (for example, Blue Ribbon Commission, 1999; Tread away Commission, 1987) in response to corporate failure and reduced investor confidence in financial reporting which culminated with the enactment of the Sarbanes-Oxley Act SOX (2002). The act was enacted to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes (SOX 2002). Sec. 409 (real time issuer disclosures) recommended that each issuer reporting shall disclose to the public on a rapid and current basis such additional information concerning material changes in the financial condition or operations of the issuer useful for the protection of investors and in the public interest” (SOX, 2002).

In the UK various reports addressing the issue of corporate governance have been published (for example, Greenbury Report, 1995; Turnbull Report, 1999). The Cadbury committee (1992) was constituted in response to the continuing concern about standards of financial reporting and accountability, heightened as a result of failures and scandals such as BICC and Maxwell. These committees were formed to review those aspects of corporate governance related to financial reporting and accountability. The underlying factors were seen as the looseness of accounting standards, the absence of a clear framework for ensuring that directors kept under review the controls in their business, and competitive pressures both on companies and on auditors which made it difficult for auditors to stand up to demanding boards (Cadbury, 1992; Tackett, 2004;).

Kenya has also not been spared from the failures in corporate governance experienced in other countries. In the 1980's more than 33 banks collapsed (Barako et al., 2006). Many companies and parastatals for example, Kenya Corporative Creameries (KCC), National Housing Corporation and the Kenya National Assurance Company among others followed suit in the 1990's (Eshiwani, 2006). Uchumi Supermarket was placed under receivership with millions of shareholders' funds in 2006, and the collapse of three stock brokerage firms in 2008, and boardrooms wars at the Copper Motors Corporation in 2011 has refocused attention on corporate governance and corporate reporting.

Corporate governance has been addressed from two fronts in Kenya. First, the Private Sector Corporate Governance Trust (PSCGT) in conjunction with the Commonwealth Association for Corporate Governance produced a sample code of best practice for corporate governance in June 2000. One of the key recommendations in the PSCGT (2000:22) code was that companies establish audit committees composed of independent non-executive directors to keep under review the scope and results of audit, its effectiveness and the independence and objectivity of the auditors. To improve on the quality of financial reporting the guidelines extended the scope and duties of external auditors. Audit scope was extended to cover proper conduct of the company's affairs, the company's financial performance and position and future risks. The auditors duties were extended to cover reporting whether the company has financial and other risky management controls, evaluating and reporting on aspects of propriety and efficiency and reporting directly to the board, regulatory authorities and shareholders as appropriate when illegal acts are discovered and to monitor basic ethical behaviour particularly in regard to the public interest (PSCGT, 2000).

Second, the Capital Market Authority (CMA) issued guidelines on corporate governance practices by public listed companies in Kenya in 2002. The guidelines were prepared in recognition of the role of good corporate governance in corporate performance, capital formation and maximization of shareholders value as well as protection of investors rights (CMA, 2002). Through legal notice No 60, 2002, CMA issued guidelines on the board and board committees, shareholders and their rights, and top management. To improve on the quality of the financial reporting process, CMA (2002) proposed the establishment of audit committees. On the rights of the shareholders section 3.2(vii) recommends the board to maintain an effective communication policy that enables both the board and management to communicate effectively with its shareholders, stakeholders and general public. Section 3.2(xii) further recommends every public listed company to encourage the establishment and use of the company's website by shareholders to ease communication and interaction among shareholders and the company.

2.2 Theory

Alvarez, Sánchez and Domínguez (2008) stated that whether to disclose corporate information is one of the most significant decisions for companies due to the multiple effects that can stem from this action. Several theories exist to explain why companies disclose information which includes agency theory, signalling theory, political cost theory and proprietary cost theory. According to agency theory in modern corporations there is often a divergence of interests between the principal and the agent due to the separation of ownership and control (Jensen and Meckling, 1976). Both the principals and the agents are assumed to be rational economic persons motivated solely by self-interest but may differ with respect to preferences, beliefs and information (Jensen and Meckling, 1976). Agents' pursuit of their self-interest instead of those

of the principal is what is referred to as the agency problem. To counter this behaviour, the principal may monitor the agents' performance through an accounting information system. The principal can also limit such aberrant behaviour by incurring auditing, accounting and monitoring costs and by establishing, also at a cost, an appropriate incentive scheme. The central problem of corporate governance as per the agency theory is how the principals ensure that executives act in the shareholders' interests rather than their own. It proposes that disclosure of corporate information is a way of controlling managers' actions and aligning incentives for managers and owners (Jensen and Meckling, 1976).

Signalling theory argues that the disclosure of information by companies is a signal to capital markets, sent to decrease the asymmetry of information, which often exists between managers and other individuals, to optimise financing costs and to increase corporate value (Alvarez, et al., 2008). Signalling theory is based on the assumption that information is not equally available to all parties at the same time, and that information asymmetry is the rule. Information asymmetries can result in very low valuations or a sub-optimum investment policy. It argues that corporate financial decisions are signals sent by the company's managers to investors in order to shake up these asymmetries. These signals are the cornerstone of financial communications policy. Ross (1977) argued that companies with good performance use financial information to send signals to the market when there is information asymmetry. Managers can be motivated to disclose private information voluntarily as they expect this to provide a good signal about their company's performance to the market.

According to political cost theory, companies will disclose information to avoid the shifting of business wealth towards the public and/or political sector. Companies will disclose when this leads to an improvement in the relationships with governments and the public sector

by decreasing political costs (for example taxes) and obtaining certain advantages for example subsidies and governmental actions in favour of the corporation (Álvarez, et al., 2008). Watts and Zimmerman (1990) noted that companies that are politically visible and subject to high political costs, which are highly dependent on firm size, are likely to disclose more information. The political cost hypothesis predicts that large firms, rather than small firms, are more likely to use accounting choices that reduce reported profits. Politicians have the power to effect upon corporation's wealth re-distributions by way of corporate taxes, regulations, subsidies etc. Managers have greater incentives to choose accounting standards, which report lower earnings (thereby increasing cash flows, firm value, and their welfare) due to tax, political, and regulatory considerations than to choose accounting standards, which report higher earnings and, thereby, increase their incentive compensation. However, this prediction is conditional upon the firm being regulated or subject to political pressure (Watts and Zimmerman, 1990).

The disclosure of corporate information need not have positive outcome. Proprietary costs theory considers the disclosure of information to be a disadvantage because of the likely detrimental use of this information by some external users (dissenting shareholders, employees, and competitors) (Álvarez, et al., 2008). This theory concludes that firms have an incentive not to disclose information that will reduce their competitive position, even if it makes it more costly to raise additional equity. However, this incentive appears to be sensitive to the nature of the competition, in particular whether firms face existing competitors, or merely the threat of entry, and on whether firms compete primarily based on price or long-run capacity decisions (Healy et al., 2001). Darrough (1993) noted that a firm's decision to disclose information to investors could damage its competitive position. As a result, in the presence of proprietary costs, a firm has to trade off the positive effects of disclosure against the negative effects. The consequences

of disclosure depend on other factors, such as the nature of market competition, the type of information, and the threat of entry of new firms into the market (Darrough and Stoughton, 1990).

2.3 Hypotheses Development

Ownership Structure

Theoretical arguments on the relationship between ownership structure and accounting information are based on agency theory (Firth et al., 2006). Jensen and Meckling (1976) argued that the separation of ownership and control results in agency costs due to the conflict of interests between managers and shareholders. When there is ownership diffusion, agency costs are high resulting in a high demand for informative disclosure to monitor managers (Fama and Jensen, 1983). As a result, the extent of disclosure is likely to be greater in widely held rather than in closely held corporations. Wang et al. (2008) considers large stockholders to be the accounting information demanders and possess more power to govern and control quality of the accounting information.

Wustemann (2004) argued that in economies with a market-oriented financial system for example USA, where a large number of corporations are listed and publicly traded, full and fair disclosure serves to reduce agency costs that arise out of the separation of ownership and control. Corporate ownership structure is heavily dependent on the regulations operating in a specific country. In Kenya for example, the Nairobi Stock Exchange listing rules directs that following the public share offering at least 25% of the shares must be held by not less than 1000 shareholders excluding employees of the issuer for companies listed in the main investment market segment (NSE). CMA Guidelines s.3.3(x) encourages institutional investors to make

direct contact with the company's senior management and board members to discuss performance and corporate governance matters as well as vote during the annual general meetings. Although this may enhance the role of institutional shareholders as a corporate governance control mechanism, by directly contacting management, the institutional investors to may reduce the need to report information, thereby reduce the level of internet financial reporting.

Corporate governance studies have identified two basic corporate ownership structures: either the concentration or the dispersion of the ownership. Whereas concentration of ownership refers to the group who has the most influence among the equity owners (block shareholders), dispersion of ownership (widely held companies) looks more at the separation of ownership between managers and equity owners as a group (Haniffa and Cooke, 2002). According to Marston and Polei (2004) and Ezat and El-Masry (2008) companies whose ownership structure is diffuse tend to disclose more information on their corporate web sites to supply the shareholders with necessary information. On the other hand companies with a concentrated ownership structure tend to disclose less information on their web sites because their shareholders can access the required information and obtain it internally. Our study uses ownership concentration (block shareholding) as a proxy for ownership structure. Block shareholders refer to entities holding more than 5% of the firm's outstanding shares (Kelton and Yang, 2008). Prior research results of studies on the relationship between ownership structure and the level of Internet reporting are mixed. Whereas some studies report no significant relationship between this variable and online disclosure (Abdelsalam and Street, 2007; Trabelsi and Labelle, 2006), others show a significant negative relationship (Kelton and Yand, 2008; Ezat

and El-Masry, 2008; Marston and Polei, 2004; Momany and Al-Shorman, 2006; Oyelere et al., 2003). Therefore we test the following hypothesis stated in the alternative form

H₁: There is a significant negative relationship between ownership structure and level of internet reporting;

Board composition

One of the major responsibilities of the board of directors is to ensure that shareholders and other stakeholders are provided with high-quality disclosures on the financial and operating results of the entity that the board of directors have been entrusted with governing (UNCTD, 2006). Good corporate governance by boards of directors is recognised to influence the quality of financial reporting, which in turn has an important impact on investor confidence (Levitt, 1998). As per the agency theory, boards are charged with monitoring management to protect shareholders' interests, and it is expected that board composition will influence whether or not a company engages in earnings management. He et al. (2009), based mainly on US studies, concluded that board independence is the most effective deterrent of fraudulent financial reporting. This was consistent with independent directors having strong incentives to improve financial reporting quality or maintain it at an acceptable level to avoid being sued. Independent directors compete in the directors' labour market and they have incentives to establish and keep a reputation of professional experts who effectively monitor managers and who look for the shareholders' best interests (Fama and Jensen, 1983).

Abdelsalam and Street (2007) examined the timeliness of corporate internet reporting by U.K. companies listed on the London Stock Exchange (LSE). The research examined the significance of corporate governance and firm-specific characteristics as potential determinants

of the timeliness of corporate internet reporting. The study found a significant association between timely corporate internet reporting and the corporate governance characteristics of board experience and board independence. Boards with less cross directorships, more experience in terms of the average age of directors, and lower length in service for executive directors provide timelier corporate internet reporting. These findings are consistent with those of Dimitropoulos and Asteriou (2010) whose study revealed that the informativeness of annual accounting earnings is positively related to the fraction of outside directors serving on the board, but it is not related to board size. Additionally, firms with a higher proportion of outside board members proved to be more conservative when reporting bad news but on the contrary they do not display greater timeliness on the recognition of good news. Firms with a higher proportion of outside directors report earnings of higher quality compared to firms with a low proportion of outside directors. Results of a study involving 284 companies listed in the NASDAQ national market by Kelton and Yang (2008) supported that board independence is positively related to corporate internet disclosure. Abdelsalam and El-Masry (2008); El-Masry and Ezat (2008) also found a positive relationship between board composition and board of directors independence and the timeliness of corporate internet reporting. Consequently, the following hypothesis is proposed:

H₂: There is a significant positive relationship between board composition and quality of internet reporting;

Audit committee independence

Several research studies have investigated the impact of having an audit committee on financial reporting quality. A common hypothesis is that independent audit committee directors would ensure better financial reporting and the expectation is generally supported by existing empirical evidence. The evidence documented in these studies suggests that independent audit committees and audit committees with some level of accounting/financial expertise are more likely to take steps (such as hiring industry specialist auditors or monitoring the firm's internal audit process) that help to ensure credible financial statements (Felo et al., 2003).

Klein (2002), examined whether audit committee and board characteristics are related to earnings management by the firm. Their study examined whether audit committee and board characteristics are related to earnings management by the firm. They found a negative relationship between audit committee independence and abnormal accruals, reductions in board or audit committee independence are accompanied by large increases in abnormal accruals and that the most pronounced effects occur when either the board or the audit committee is comprised of a minority of outside directors. These results suggest that boards structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process. Biao, Davidson and DaDalt (2003) examined the role of the board of directors, the audit committee, and the executive committee in preventing earnings management. They concluded that board and audit committee activity and their members' financial sophistication may be important factors in constraining the propensity of managers to engage in earnings management.

Kelton and Yang (2008) discovered that firms with more diligent audit committees are more likely to provide internet financial disclosures. However, Rainsbury et al. (2009) found no significant association between the quality of an audit committee and the quality of financial reporting. Beasley (1996) conducted a study to predict whether inclusion of larger proportions of outside members on the board of directors significantly reduces the likelihood of financial statement fraud. The results of this study indicated that the presence of an audit committee does not significantly affect the likelihood of financial statement fraud.

Lin et al. (2006) conducted a study to examine the association between the occurrence of earnings restatement and characteristics of the audit committee. The results supported the hypothesis that a larger audit committee may provide more oversight over the financial reporting process. Such oversight seems to improve earnings quality by reducing the probability of restating financial statements after their original filings with the SEC. However, the study provided no evidence that the other audit committee characteristics for example, independence, financial expertise, activity, and share ownership have any impact on quality of reported earnings. These is consistent with a study carried out by Rainsburya et al.(2009), whose results show no significant association between the quality of an audit committee and the quality of financial reporting. The results suggest that the benefits of ‘best practice’ audit committees may be less than anticipated by regulators and policymakers. From the studies above the following hypothesis is proposed:

H₃: There is a significant positive relationship between independence of audit committee and quality of internet reporting;

Financial Expertise

The reputational capital theory suggests that academics and professionals protect their reputational capital by leveraging their academic and professional expertise to improve firms' financial reporting quality (Trainor and Finnegan, 2013). Krishnan et al. (2011) examined the role of legal expertise on firms' corporate boards and found that directors with legal expertise on the audit committee are associated with higher financial reporting quality. They argue that the legal expertise on firms' corporate boards will better enable the corporate board to discuss matters pertaining to a legal issue with firms' corporate lawyers. In other words, lawyers serving on the board allow the board to process legal information with greater ease. Prior studies also show that financial expertise on the board is positively associated with perceived financial reporting quality (Felo et al. 2003). Furthermore Kelton and Yang (2008) have reported that companies with higher percentage of audit committee members that are considered financial experts are more likely to engage in IFR. We hypothesis that:

H4: The level of Internet financial reporting is positively associated the presence of a financial expert on the board.

Control Variables

We control for company characteristics that have been found to be associated with information quality since failure to control for confounding variables could lead to falsely rejecting the hypothesis when in fact it should be accepted (e.g., According to Bartov et al., 2000). Specifically, we control for company size and profitability. For example, larger companies face greater political costs and need to send out signals to divulge their management practices (Álvarez, Saénchez and Domínguez, 2008). A number of previous studies found a

significant association between company size and information disclosed on websites (e.g., Martson, 2003) Polei 2004; Kelton and Yang, 2008). In respect of the relationship between profitability and information quality, Mcgee, & Yuan (2008) noted that companies hesitate to report bad news and take more time to massage the numbers or resort to creative accounting techniques when they have to report bad news. A study by Owusu-Ansah (2002) concluded that profitability has a significant positive effect on mandatory disclosure and reporting practices of the sample companies. Others (e.g. Premuroso and Bhattacharyaa, 2008; Doaa et al., 2010) observed that profitability is the determinant and explains the variation in the amount and presentation formatting of information disclosed. However, Martson (2003); Oyelere *et al.* (2003); Marston and Polei (2004); Bonsón and Escobara, (2006) concluded that there was no association between profitability and the extent of financial disclosure.

3. Research Method

The study uses content analysis of information reported on corporate websites to examine the quality of information disclosed by listed companies on their websites. Content analysis has been used in many similar studies to examine disclosure activities of companies (for example, Abdelsalam and Street, 2008; Khadaroo, 2005). As at December 31, 2010 there were fifty five companies listed on the Nairobi Securities Exchange (NSE). Two companies were excluded from the study as they are suspended by the NSE. Five other companies which had no websites were also excluded from the study. This left forty eight companies that comprise the sample of interest.

Data was collected from each company's website every Friday during a four months' period, beginning March 2011 to end of June 2011. This period covers the most active reporting

period for most organisations, in Kenya as they report either end of December or end of March with interim reports being released end of June thus most companies are expected to update their websites during this period. The data collected from each company was then aggregated and averaged to obtain the score for each company. This process was repeated for each company during the four month's period in 2013 (March to June) resulting to a total of 96- firm years. The design is chosen because the population is small and the use of panel data increases the number of observations, thus allowing meaningful statistical analysis.

Although there are a number of internet business reporting indices (e.g., Despina & Demetrios, 2009; Xiao, et al., 2004) the IBRQ index developed by Hanafi et al. (2009) was chosen since it is weighted (using percentages) and is also considered more comprehensive (**See Appendix B**). The IBRQ index was developed with the primary objective to measure the level of internet reporting of publicly listed companies. The index consists of two sections; one that looks at website design (weighted 40%) and a second section that focuses on the information content disclosed (weighted 60%). Web content is further sub-divided into financial (60%) and non-financial (40%) information. Hanifa et al. (2009) argues that web content should be clear, unambiguous, timely, and relevant to the needs of existing and potential investors. The web design section is also subdivided into three subsections namely: a) usability and accessibility (40%), b) navigation (30%) and c) timeliness (30%). Hanafi et al. (2009) noted that good web design is not only good practice for the company to maximize utilization of web content, but also to delivering maximum benefits to users. Each sub section has a list of items that are expected to be either present or absent on the individual company's website (**See Appendix A**). For our current study we read through all the information on the website of each company to identify the items. Where an item listed on our index was found to be present on the company's website we

awarded a score of 1 otherwise 0. The scores were then aggregated and weighted using the percentage shown on the index (**Appendix B**). If an item was deemed as being not applicable, same was reduced from the total score before the calculation of the section weights.

Information contained in the hard copies of the annual reports was used to obtain the corporate governance and firm specific variables where complete versions were not available on corporate websites. Data was summarised using descriptive statistics and the OLS multiple regression model below was used to examine the association between corporate governance variables and quality of internet reporting (Ahmad., & Mansor, 2009; Levitt, 1994).

Following the hypotheses development in Section 2, this study specify the following ordinary least squares (OLS) regression models:

$$WCon = \beta_0 + \beta_1 OS + \beta_2 BC + \beta_3 ACI + \beta_4 FEXP + \beta_5 CS + \beta_6 FP + \varepsilon \dots \dots \text{(Model 1)}$$

$$WDn = \beta_0 + \beta_1 OS + \beta_2 BC + \beta_3 ACI + \beta_4 FEXP + \beta_5 CS + \beta_6 FP + \varepsilon \dots \dots \text{(Model 2)}$$

$$IFR = \beta_0 + \beta_1 OS + \beta_2 BC + \beta_3 ACI + \beta_4 FEXP + \beta_5 CS + \beta_6 FP + \varepsilon \dots \dots \text{(Model 3)}$$

The full definition of all the variables is shown on Table 1. These measures have been used in other previous studies (e.g. Kelton and Yong, 2008; Abdelsalam and El-Masry, 2008; Ezat and El-Masry, 2008 Abdelsalam and Street, 2007; Ehikioya, 2009; Mangena and Chamisa, 2008; Bokpin and Isshaq, 2009; Adegbite, 2012) and are also recommended by different corporate governance codes of different countries (e.g. the Cadbury committee, 1992; Blue Ribbon committee, 1999; CMA, 2002).

[INSERT TABLE 1 ABOUT HERE]

4. Results

This section presents the results of the regression analysis. First the study reports the descriptive statistics in section 5.1, while section 5.2 presents of the regression results.

4.1: Descriptive statistics and correlation matrix

The results in Table 2 below, show that the average score for web design is 21.9%, while web content which comprises of both financial and non financial information averaged 46.3%. The overall percentage average of level of internet reporting (IFR) which includes web design and web content was 68.2%, which is considered above average. Davey and Homkajohn (2004) proposed that firms which achieve 50 percent and above in IFR score percentage be accepted as having well developed websites. A study by Abdelsalam and El-Masry (2008) found that Irish-listed companies, on average, satisfy only 46 per cent of the timeliness criteria assessed by the timeliness index. Aziz et al. (2011) in Malaysia concluded that a big portion of the total sample scored within the 40% to 59 %. Twenty-seven percent of the firms scored 50% to 59 %. Twenty-six percent of the firms scored 40 percent to 49 percent marks. In Indonesia Almilia and Surabaya (2009) found the disclosure index scores ranged from a low of 22% to a high of 64.50% with an average score of 44.34%. At an overall internet reporting quality index of 68.2%, Kenyan listed companies' compares well with companies in other countries and the quality of internet reporting is considered high. Furthermore the average total score increased from 59.6% in 2011 (not report here) to 68.2 % in 2013, showing that the amount and presentation of information disclosed at corporate Web sites has been increased over time.

The ownership structure measured as the percentage of outside shareholders who own at least 5% of the total outstanding shares was 64.8%, while 53.1% had a financial expert on their

board. The proportion of independent audit committee members to total audit committee members was 84.2% while board composition (proportion of independent directors to total directors) was 74.1%. Average firm size was 23.2, indicating that the sample consisted of large companies, while average profitability was 9.1%. Leverage measured as the ratio of total non-current liabilities to owners' equity was 44.13%.

[INSERT TABLE 2 ABOUT HERE]

The Pearson correlations are presented in Tables 3, 4 and 5. The study uses the correlation matrix to determine whether the independent variables are highly correlated. The results shows that there is little correlation among most of the independent variables as the highest correlation, 0.4418 is less than the benchmark of 0.7, suggesting that the problem of multicollinearity is not serious (Tabachnick and Fidell, 1996).

[INSERT TABLE 3, 4 and 5 ABOUT HERE]

4.2 Regression results

As shown on Table 6, all the regression models have significant explanatory power. The adjusted R² of the three models are 50.1%, 48.5% and 59.2% respectively while the F-values of 16.9, 15.9 and 24.0 respectively are significant at the 1% level or better. The first hypothesis on ownership structure predicted a significant negative relationship between ownership structure and quality of reporting. As a result, the extent of disclosure is likely to be greater in widely held

rather than in closely held corporations. Kenyan listed companies are closely owned with an average 64.7% of the shares being held by block shareholders. The results show that, the relationship is negative and significant for two of the three IFR measures and therefore supportive of the hypothesis which is consistent with the agency theory argument that closely held companies are likely to be associated with low quality reporting. A possible explanation would be that since 64.7% of the shares are held by block shareholders there is no pressure on these companies to improve the quality of reporting. These shareholders can access through management any additional information they may require. The results are also consistent with the findings of Abdelsalam and Street (2007) who concluded that block ownership is associated with less timely corporate internet reporting.

The third hypothesis on audit committee independence posits a significant positive relationship between audit committee independence and quality of reporting. The argument is that independent audit committee directors would take time to review the company's reporting process and therefore ensure better financial reporting. At 84.2% Kenyan audit committees are fairly independent given that it's a requirement of the CMA guidelines and the result in table 4 is supportive of this hypothesis as the coefficients are positive and statistically significant for all the four measures. This is consistent with the findings of Felo, et al., (2003); Kelton and Yang (2008) who found that an independent audit committee is more likely to take steps (such as hiring industry specialist auditors or monitoring the firm's internal audit process) that help to ensure credible financial statements.

H4 predicts that the level of IFR will be positively associated with the board's financial expertise. As shown in Table 6 this variable is positive and statistically significant across the three measure of IFR. Our findings are consistent with the reputational capital theory suggests

that academics and professionals protect their reputational capital by leveraging their academic and professional expertise to improve firms' financial reporting quality (Trainor and Finnega, 2013). We conclude that the presence of a finance expert in the board may provide more diligence within the board and this may in turn enhance the level of IFR (Kelton and Yang, 2008)

The hypothesis on board composition predicted a significant positive relationship between board composition and quality of internet reporting. The major responsibility of the board of directors is to ensure that shareholders and other stakeholders are provided with high-quality disclosures. According to Agency theory, boards are charged with monitoring management to protect shareholders' interests, and it is expected that board composition will influence whether or not a company improve the reporting quality. Kenyan boards of directors are fairly independent at 76.9% and the expected results would have been a significant positive relationship with quality of reporting. However, as shown in Table 6 the beta coefficients are negative and not statistically significant and therefore the hypothesis is not supported. These findings may explain the many boardroom wars currently being reported in the media involving Kenyan listed companies e.g. CMC, East African Portland Cement etc.

In respect of control variable, the results indicate that company size is positively but not significantly associated with and quality of internet reporting. These results are inconsistent with the findings of Marston and Polei (2004) who concluded that firm size was the only significant explanatory variable for the amount of information disclosed at corporate Web sites which is stable over time. Other researchers e.g. Debreceny, et al., (2002); Bollen, et al., (2006); Bonsón and Escobara, (2006); El-Masry and Ezat (2008); Premuroso and Bhattacharyaa (2008); also found a positive relationship between firm size and corporate reporting. The results relating to

company profitability are, however, positive and significant for two of the three IFR measures. Signalling theory suggests that profitable firms have the incentive to distinguish themselves from less successful firms to raise capital at the lowest possible price and may enhance Voluntary Web disclosures achieve this goal (Onyelere et al. 2003). However these findings are not consistent with those of Martson (2003), Oyelere *et al.* (2003), Marston and Polei (2004) and Bonsón and Escobara, (2006) who concluded that there was no association between profitability and the extent corporate disclosure.

4.2.1 Additional Analysis

Additional analyses were performed to check for the robustness of our results. Although the correlation results (Tables 3, 4 and 5) suggest that the independent variables are not highly correlated, the correlation between Audit Committee and firm size ($r= 0.4418$) is high when compared to the other correlations. The study therefore estimates the regressions by including these two variables in separate models (Magena and Chamisa, 2008). The results as reported in Table 6 remain unaffected.

Second, the regressions were re-estimated with an industry dummy variable (1 if the firm was in manufacturing industry, otherwise 0) since this control variable has not been included in our regression model. The results reported in Table 6 remain unchanged.

Lastly, following Magena and Chamisa (2008) and Morck et al. (1988) a dummy variable poor performers and good performance (0,1) was introduced, and re-run the regression models. The findings indicated that the results reported in Table 6 remain almost similar. The study therefore concluded that the results are robust.

5. Conclusions

This study extends research on corporate internet reporting by examining the association between corporate governance and the level of internet reporting in Kenya controlling for

company characteristics (firm size and profitability). The study found that the level of internet reporting in Kenya was 68.2%. The results indicate that corporate governance mechanism (ownership structure, audit committee independence, financial expertise on the board) is associated level of internet reporting. However, other corporate governance mechanisms (such as board composition) are not associated with the level of internet reporting.

The results provide empirical evidence to policy makers that corporate governance and firm specific variables is associated with quality of internet reporting. Regulatory guidelines should be put in place to enhance disclosure of quality information on corporate websites. This will ensure easy availability of corporate information resulting in correct valuation of companies and more informed investor decisions. Companies should also re-examine the criteria used in selecting their directors. These will ensure that the directors are accountable to the shareholders.

Future studies could investigate new models to consider factors that could influence Kenyan companies to increase Internet disclosure since the models only accounted for 60%. As corporate organizations become more complex and companies, continue to operate in increasingly competitive and demanding markets with investors eager for information, increased use of the Internet as a disclosure medium will likely occur.

This study is not without limitations. First only listed companies have been included in the study and the quality of information reported by unlisted companies represents a limitation of the study. Restricting the study of quality of reporting to publicly traded corporations excludes a significant and most efficient institutional arrangement for undertaking productive activities. Secondly like many empirical studies that rely on disclosed proxy data, proxy disclosures may not represent all aspects of Internet Financial Reporting practices.

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Table 1: Definition of variables

Variable(s)	Definition
<i>Dependent</i>	
IFR	Internet reporting quality measured by the Business Reporting Quality
WCon	Web Content measured by the Business Reporting Quality
WDn	Web Design measured by the Business Reporting Quality
<i>Independent</i>	
<i>Corporate Governance</i>	
OS	The operational definition of ownership structure is block shareholding by measured as the percentage of outside shareholders who own at least 5% of the total outstanding shares
BC	The operational definition of board composition is proportion of independent directors to total directors.
ACI	The operational definition of independence of audit committee is the proportion of independent audit committee members to total audit committee members.
FINEXP	The operational definitional of a financial expertise is the presence of a board member with Accounting and/or Finance professional qualifications
<i>Control Variables</i>	
CS	The operational definition of firm size is the natural logarithm of end of year 2010 total assets
FP	The operational definition of firm performance is the return on equity (net profit after tax divided by total equity).

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Median
Web Design	96	1.8	59.1	46.313	15.124	51.711
Web Content	96	7.273	35.636	21.918	5.626	23.327
Internet Reporting Quality	96	12.927	93.836	68.229	18.828	73.916
Ownership Structure	96	25.413	96.238	64.797	15.736	68.154
Board Composition	96	0.222	1.000	0.7412	0.1542	0.750
Audit Committee Independence	96	0.000	1.000	0.842	0.322	1
Financial Expert	96	0	1	0.531	0.502	1
Firm Size	96	18.714	26.629	23.225	1.891	23.207
Firm Performance	96	-2.601	0.627	0.0912	0.428	0.148

Table 3: Correlation Matrix

	A	B	C	D	E	F	G
Web Design A	1.0000						
Ownership Structure B	-0.5772	1.0000					
Board Composition C	0.0276	-0.1087	1.0000				
Audit Committee Independence D	0.4219	-0.2701	0.1752	1.0000			
Firm Size E	0.3458	-0.3247	0.1729	0.4418	1.0000		
Firm Performance F	0.3257	-0.1993	0.0660	0.2750	0.1920	1.0000	
Financial Expert G	0.5900	-0.4065	0.1767	0.2664	0.4197	0.1541	1.000

Table 4: Correlation Matrix

	A	B	C	D	E	F	G
Web Content A	1.0000						
Ownership Structure B	-0.3709	1.0000					
Board Composition C	0.1904	-0.1087	1.0000				
Audit Committee Independence D	0.3407	-0.2701	0.1752	1.0000			
Firm Size E	0.3262	-0.3247	0.1729	0.4418	1.0000		
Firm Performance F	0.2019	-0.1993	0.0660	0.2750	0.1920	1.0000	
Financial Expert G	0.6934	-0.4065	0.1767	0.2664	0.4197	0.1541	1.0000

Table 5: Correlation Matrix

	A	B	C	D	E	F	G
Corporate Internet Reporting A	1.0000						
Ownership Structure B	-0.5338	1.0000					
Board Composition C	0.0786	-0.1087	1.0000				
Audit Committee Independence D	0.4452	-0.2701	0.1752	1.0000			
Firm Size E	0.3770	-0.3247	0.1729	0.4418	1.0000		
Firm Performance F	0.3215	-0.1993	0.0660	0.2750	0.1920	1.000	
Financial Expert G	0.6797	-0.4065	0.1767	0.2664	0.4197	0.1541	1.0000

Table 6: Regression Results

	Model 1		Model 2		Model 3	
	WCon	WDn			IFR (Total)	
	Coef	T- Statistics	Coef.	t-Statistic	Coef.	t-Statistics
Constant	63.185	3.678***	19.491	3.003***	0.822	4.253***
Ownership Structure	-27.570	-3.506***	-2.676	-0.901	-0.301	-3.406***
Board Composition	-12.015	-1.646	1.816	0.659	-0.103	-1.256
Audit Committee Independence	10.527	2.680***	2.625	1.769*	0.134	3.048***
Financial Expert	12.825	5.023***	7.008	7.265***	0.197	6.870***
Firm Size	-0.271	0.699	0.137	-0.521	-0.003	-0.506
Firm Performance	5.509	2.045**	0.720	0.708	0.062	2.032**
F- Statistics		16.91***		15.93***		24.01***
R-Squared		50.1		48.5		59.2

Appendix A: Measurement Scheme**The measurement scheme of web design and web content****Web design (40%)**

1. **Usability and accessibility (40%)**
 - a) **User control**
 - i. Control for font size
 - ii. Control for Colour
 - iii. Text
 - b) **Accessibility to various interfaces**
 - i. Description of images
 - ii. Recognizable web address
 - c) **Clarity and conciseness**
 - i. Readability of text
 - ii. Alignment of text
 - iii. Number of graphic images presented
 - d) **Site-wide features**
 - i. Availability of printable pages
 - ii. Terms and conditions
 - iii. Number of foreign languages available

2. **Navigation (30%)**
 - a) Site maps
 - b) Site search
 - c) Help buttons
 - d) Links to related pages on same site or external sites
 - e) Ease of access to investor relation and company annual reports(*Number of clicks from home page to access such information*)
3. **Timeliness (30%)**
 - a) Date of last update
 - b) Press releases
 - c) Webcasts
 - d) E mail alert services
 - e) Financial calendars
 - f) Update alerts

Web content (60%)

1. Financial Information (60%)

Financial Statement (30%)

- a) Statement of Financial Position
 - Current assets/non-current assets
 - Current liabilities /non-current liabilities
 - Plant property and equipment
 - Intangible assets
 - Financial assets
 - Investments
 - Other assets
- b) Statement of Comprehensive Income
 - Revenue
 - Finance costs
 - Taxes
 - Expenses
 - Profit figure
- c) Statement of Changes in equity
 - Profit and loss for the period
 - Opening retained earnings
 - Closing retained earnings
- d) Cash flow statement
 - Operating
 - Investing
 - Financing
- e) Notes to financial statements
 - Compliance with IFRS
 - Significant accounting policies
 - Supporting information for items in balance sheet, income statement and cash flow statement.

Quarterly Reports (25%)

- Number of quarters disclosed
- Proper disclaimers as the information is unaudited
- Forward looking statements

Financial highlights (25%) (Comparison over a 5-10 year period)

- Revenue
- Operating profits

- Earnings per share
- Dividends payments
- Liquidity ratios
- Profitability ratios
- Operating ratios

Shareholder information (20%)

- Current price quotes
- Historical price quotes
- Trading volume
- Dividend history
- Availability of price charts
- Analysts reports and forecasts
- Shareholder analysis by size, types, geographical region
- Electronic share trading facilities (*proxy forms, online voting at AGMS, online registration*)

2. Non financial information (40%)

General items (15%)

- Nature of business
- Principle business activity
- Vision
- Mission
- Strategies
- Contact information for the company

Management team (20%) (*Check for photo, message, and biography interview*)

- Chair person
- CEO
- Board of directors

Corporate governance /board committee (20%) (*Check existence, composition, roles, & responsibilities, committee charters*)

- Corporate governance report
- Audit committee
- Remuneration committee

Corporate social responsibility (15%)

- Corporate social responsibility policy
- Statement of compliance
- Graphic images

Online trading/marketing (15%)

- Confirm existence
- Proper disclaimer of products offered

Other information (15%) (*Check for existence and disclosure format*)

- Auditor information and AGM

A score of 1 (for present) and 0 (for absent) will be assigned to each disclosure item

Adapted from Hanafi, S. R., Kasim, M. A., Ibrahim, M.K., and Hancock, D.R. (2009)

Appendix B

