

Corporate governance and company performance across Sub-Saharan African countries

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Abstract This paper examines the extent to which publicly listed companies across Sub-Saharan African countries have adopted “good corporate governance” practices. We investigate the association of these practices with companies’ accounting performance and market valuation. The findings indicate that companies across Sub-Saharan Africa have only partly implemented good corporate governance practices. We find a positive association between our constructed index of good corporate governance practices and accounting performance. However, we find a negative association between the corporate governance index and the market valuation. When the sub-indices are considered, we find that only the board of directors and the audit committee sub-indices are associated positively and significantly with accounting performance. However, we find that only the audit committee sub-index is associated negatively and significantly with market valuation.

Keywords: Corporate governance index; company performance; Sub-Saharan Africa

JEL Classification: G32 G34 L22 L25 P21

1 Introductionⁱ

There is a common perception in the corporate world that the adoption of “good corporate governance” practices enhances company performance (Economist, 2010) and some research supports the existence of such an effect in emerging markets (Klapper and Love, 2004). Based on this perception and/or the pressure to adopt such practices, sometimes formalized in terms of corporate governance codes, a growing number of companies in developing countries are implementing “good corporate governance” practices (Garay and González, 2008).

Historically, the recommended corporate governance practices or codesⁱⁱ were designed in developed countries. In order to attract capital from developed countries, companies from the developing world find it advantageous to mimic their corporate governance practices (Reed, 2002). However, the characteristics of developing countries, such as underdeveloped capital markets and weak legal systems, make their corporate environment fundamentally different from that in developed countries (Rabelo and Vasconcelos, 2002). This raises the following question: To what extent are the corporate governance practices that are advocated in developed countries applicable in developing countries? We address this issue by conducting company-level research on listed companies in Sub-Saharan African countries. In particular, we examine the association between corporate governance practices and company performance.

The motivation for studying company-level corporate governance in developing countries, such as those in Sub-Saharan Africa, is the assumed importance of good corporate governance for country-level economic development (Claessens, 2006). Our research is also motivated by the economic reforms undertaken by many Sub-Saharan African countries in order to attract foreign investment and mobilize domestic savings and investment, as these reforms have

ⁱ Abbreviations used in this paper: Ordinary Least Squares (OLS); Generalized Method of Moments (GMM); International Financial Reporting Standards (IFRS), Return on Assets (ROA).

ⁱⁱ These codes are considered to be formalized good corporate governance practices.

directly or indirectly attempted to improve corporate governance practices, which in turn can positively affect company performance. Furthermore, there is so far only a limited amount of empirical research on corporate governance practices across Sub-Saharan African companies (such as Nganga et al., 2003). The few existing studies that examine the link between corporate governance and company performance in Sub-Saharan African countries are single-country studies, limiting the generalizability of the findings. In this study, we utilize data from multiple countries to examine the association between corporate governance and company performance. To address this research issue, firstly, we identify the extent to which established norms of good corporate governance practices are used by companies listed on stock markets across Sub-Saharan African countries; secondly, we test the hypothesis that there is a positive association between good corporate governance practices and company performance.

Due to the lack of a reliable secondary data source, we utilize hand-collected data from the annual reports of the companies. We use the dynamic GMM to examine the association between corporate governance and company performance. We measure company performance by two alternative measures, namely accounting performance (ROA) and relative market valuation (Tobin's Q).

We find a positive association between corporate governance index and company accounting performance but a negative association between the corporate governance index and market valuation. Furthermore, we examine the association between various sub-indices of corporate governance and company performance. Of the five sub-indices we construct in this paper, we find that only the board of directors and audit committee indices are positively and significantly associated to the accounting performance. However, we find that the audit committee sub-index is associated negatively and significantly to the market valuation. This suggests that some features of the corporate governance index are more important than others

in explaining the association between corporate governance and company performance in Sub-Saharan Africa. However, further investigation indicates that there was an overall decline in market valuation during our sample period, coinciding with the global financial crisis. Therefore, we reason that the overall decline in stock prices during the period contributes to the observed negative association.

The paper proceeds as follows. Section 2 examines prior corporate governance research and its relevance to Sub-Saharan African countries. Section 3 defines our corporate governance index scores. Section 4 describes the different variables we use in the regression analysis. Section 5 describes the data and methodology, and descriptive statistics are given in Section 6. Section 7 presents the results, and Section 8 concludes.

2 Relevance of corporate governance in Sub-Saharan African countries

Implementing economic reforms that foster sustainable economic growth is high on the policy agendas of many Sub-Saharan African countries. These reforms include financial and capital market reforms. One aspect of such reforms is the implementation of systems and practices to support good corporate governance. In terms of the legal system, this commonly implies protecting shareholders' rights, enhancing corporate transparency and ensuring a greater disclosure of financial and non-financial information. The promotion of good corporate governance practices, often in the form of codes or other soft laws, often involves measures to improve board recruitment, board effectiveness and top management incentives.

Economic globalization has been one of the driving forces behind the major economic reforms in many Sub-Saharan African countries (Asiedu, 2004, Berry, 2009, Reed, 2002). However, it is believed that these reforms are still incomplete, particularly from the point of view of foreign investors (Asiedu, 2002, Asiedu, 2004). Good corporate governance practices, both at the country and the company level, are regarded as important factors for attracting

domestic investment and ensuring greater inflows of foreign direct investment (Claessens, 2006). To be able to attract investors, it is commonly emphasized that companies need to design and implement good corporate governance practices. In other words, company's adherence to good corporate governance practices is thought to be an important factor in investment decisions (OECD, 2004).

Following the above reasoning, a number of Sub-Saharan African countries have adopted codes of corporate governance similar to those advocated and used in developed countries (Nganga et al., 2003). These codes or recommended "best practices" are based on similar codes promoted by organizations (OECD, 2004, South Africa IOD, 2009), private scholars (Shleifer and Vishny, 1997), and practitioners (Cadbury, 1992, Greenbury, 1995). For example, the corporate governance codes of Sub-Saharan African countries such as Nigeria, Kenya and Ghana recommend that companies have non-executive directors, form audit committees with independent members, and separate the positions of chairperson and chief executive as among of good practices of corporate governance.

Thus, many of the corporate governance practices promoted in Sub-Saharan Africa originate from developed countries (Hearn, 2011). However, developed countries have, over a long period of time, developed and implemented systems of laws and regulations that govern stock markets and other economic activities (La Porta et al., 2008). These systems set the "rules of the game" in the market (North, 1990), and accordingly help different stakeholders to interact with each other more easily.

Even though many reforms have been undertaken, Sub-Saharan African countries still have rather undeveloped stock markets, and in most cases the stock markets only opened in the 1990s, except in the cases of Kenya and Nigeria, whose stock markets started trading in 1954 and 1960, respectively. Before the recent economic reforms that opened up the market for private ownership, the distribution of profits to owners (i.e. governments) was not a major

concern. Previously, executives had few incentives to ensure that their companies made a profit and paid dividend; hence, the application of good corporate governance practices was not important, either to the executives or the owners.

The enforcement of laws and regulations is regarded as a central issue of good corporate governance practice (Berglöf and Claessens, 2006, La Porta et al., 2000). According to Hillier et al. (2011), strong law enforcement reduces the gap in information quality between company insiders and outsiders, which consequently reduces the costs of external financing. Many developing countries, including those in Sub-Saharan Africa, have relatively weak systems of laws and regulations (Rossouw, 2005). Some of these countries lack some of the laws and regulations that would protect the interests of different stakeholders. Even when good laws and regulations exist, enforcement is often relatively poor (Okpara, 2011). Many of these countries are perceived to be highly bureaucratic and corrupt (Kaufmann et al., 2009). According to the Transparency International Indices, many Sub-Saharan African countries are ranked among the most corrupt countries in the world (Transparency International, 2009). Corruption and bureaucracy alter the effectiveness of legal systems (Deflem, 1995), and particularly the enforcement of laws, even in countries where good laws exist. Poor legal systems hinder the effectiveness of market activities and this leads to low productivity (Lambsdorff, 2003).

The existence of weak legal systems and their effects on economic activities have major implications for the types of corporate governance practices that can be applied effectively across Sub-Saharan Africa. Based on the status of the legal systems and the enforcement of laws in these countries, it can be reasoned that corporate governance practices may not be as effective as they are in developed countries. However, a weak legal environment offers an opportunity for companies to differentiate themselves from the rest and send signals to attract investors by choosing, independently, to adopt good corporate governance practices (Garay

and González, 2008, Klapper and Love, 2004). There is empirical evidence suggesting that private enforcement mechanisms are often more effective than public ones (Berglöf and Claessens, 2006). This means that self-regulatory systems may help to compensate investors for the weak legal environment in which these companies operate (Bebchuk et al., 2009).

Previous research indicates that corporate governance mechanisms at the company level matter more in countries with weak legal environments (Klapper and Love, 2004). According to Okpara (2011), companies from developing economies, with weak corporate governance, will find it difficult to raise capital and attract foreign investors. This implies that good corporate governance might be more important for companies in developing countries such as those in Sub-Saharan Africa. Those companies that adopt good corporate governance practices are likely to perform better than those that do not. In this regard, we hypothesize that there is a positive association between good corporate governance and company performance in Sub-Saharan African countries.

3 The Sub-Saharan African corporate governance index

Corporate governance is a multidimensional concept that can be defined in many different ways. We define corporate governance as the mechanisms that are used to protect the interests of different stakeholders (Cadbury, 1992). The existing literature highlights several such corporate governance mechanisms, which can be categorized into two forms: internal and external. Internal mechanisms include boards of directors, debt financing, ownership concentration, executive compensation, and executive director shareholdings. External mechanisms include measures such as the market for corporate control, product market competition, and the executive labor market. These mechanisms can work either as complements or substitutes to one other (Cremers and Nair, 2005). Because of the importance

of both forms, it can be argued that corporate governance works better when the two forms are present and applied effectively.

Based on the view that corporate governance is a multidimensional concept, some researchers (Balasubramanian et al., 2010, Gompers et al., 2003, Klapper and Love, 2004, Black et al., 2006c) have attempted to develop corporate governance indices that aggregate a number of mechanisms to investigate how corporate governance relates to company performance. However, there is no single, standard corporate governance index that has been accepted by scholars. The dimensions and key questions used to construct these indices differ from one study to another (Balasubramanian et al., 2010), which is not surprising since perceptions of “good corporate governance practices” differ across countries and investors. This is to be expected, because corporate governance practices are affected by legal, economic, political, historical, and cultural environments (Aguilera and Jackson, 2003). Scholars have recognized these differences when constructing corporate governance indices. This implies that the phrase “one size fits all” seems not to apply to corporate governance practices (Arcot and Bruno, 2007, Coles et al., 2008).

Based on these arguments, we construct a corporate governance index based on various dimensions of corporate governance at the company level, as used in the literature and recommended in various corporate governance codes. We specifically include corporate governance practices related to (1) the board of directors, (2) the audit committee, (3) disclosure and transparency, (4) the remuneration committee, and (5) shareholders’ rights. We include several statements that represent each of these indices, as shown in the appendix. However, as is the case with other studies, with this approach we cannot claim to have included each and every item that is considered a signal of good corporate governance practice. We acknowledge this as one of the limitations of our approach.

Board of Directors: The board is an important internal mechanism for resolving agency problems. Boards of directors monitor management on behalf of the shareholders and provide resources/advice (Adams and Ferreira, 2007, Hillman and Dalziel, 2003). Furthermore, boards of directors select the corporate leadership (the CEO in particular), define the corporate mission, and set performance targets that the management are expected to achieve. Because of the roles played by boards, particularly in monitoring management, board structure is believed to be among the most important factors that determine the effectiveness of corporate governance. Board's features such as board independence (Arcot and Bruno, 2007), and the separation of the positions of chairperson and chief executive (Black et al., 2006b, Garay and González, 2008), are considered as key determinants of board effectiveness. Therefore, a company that wants to adopt good corporate governance practices should ensure that its board has these features. We construct our board of directors' index based on the board effectiveness literature (see Appendix).

Audit Committee: An independent audit committee fulfills a vital role in corporate governance (Engel et al., 2010, South Africa IOD, 2009). Among other things, it is critical in ensuring the integrity of reporting and internal financial controls, and identifying and managing financial risks (South Africa IOD, 2009). To achieve this, the audit committee meets regularly with the company's external and internal auditors to review the company's financial statements, audit process, and internal accounting controls (Klein, 1998, Klein, 2002). This helps to alleviate the agency problem by facilitating the timely release of unbiased accounting information by managers to shareholders, creditors, and other stakeholders, thus reducing the information asymmetry between insiders and outsiders (Klein, 1998).

To have good corporate governance practices within a company, the audit committee must be effective in carrying out its duties. The composition and functions of the committee can be used as observable features that influence its effectiveness. Such features include, for

example, the independence of the members of the audit committee (Chan and Li, 2008, Krishnan, 2005, Balasubramanian et al., 2010), and the chairperson of the board not being a member/chairperson of the audit committee (South Africa IOD, 2009).

Disclosure and Transparency: The corporate governance literature recognizes disclosure and transparency as important corporate governance practices (Okpara, 2011, Hope and Thomas, 2008, Parum, 2005, Spira and Page, 2010). Good corporate governance practices suggest that a company should ensure timely and accurate disclosure is made on all material matters (OECD, 2004). The more detailed, accurate, and reliable is the information disclosed by a company, the better will be the public perception of the company's traded shares (Barako et al., 2006). Thus, as many companies operating in Sub-Saharan African countries are aiming to attract investors, disclosure may be more important for them.

Many investors consider good corporate governance to be one of the most important criteria when making investment decisions (Barako et al., 2006). Investors, who expect to use company reports to make their investment decisions, want to see accurate and reliable information that is readily available. That is, in order to attract investors, companies need to assure these investors that they are adhering to good corporate governance practices, and they can demonstrate this by providing detailed, accurate, and reliable information in their reports. Based on this argument, we reason that the disclosure of good corporate governance practices is as important as the adoption of such practices.

As a result, in this study, we focus on the disclosure of information that is related to corporate governance. This information includes directors' qualifications (Black et al., 2006b). Good corporate governance practice suggests that a company should elect directors with the right qualifications and skills to develop the company's strategy and help it to adapt to present and future challenges (Financial Reporting Council, 2010, Hilb, 2011, Parum, 2005). Also, a company should disclose the remuneration paid to its directors and executives

(Garay and González, 2008, OECD, 2004, Renders et al., 2010), information about the company's ownership (OECD, 2004, Renders et al., 2010), and the company's commitment to effective corporate governance (Klapper and Love, 2004, Renders et al., 2010). It is important that companies provide adequate information to demonstrate that all of these issues are being addressed.

Remuneration Committee: The remuneration committee is one of the corporate governance practices used by the board of directors to ensure that insiders' interests are aligned with the interests of the shareholders. The remuneration committee helps the board of directors to set the executives' compensation. Based on agency theory, we argue that executive compensation *should* be positively related to company performance (Jensen and Murphy, 1990). This issue has attracted extensive research and debate around the world (Tosi et al., 2000). Because of the expected pay-performance relationship, many investors expect the level of executives' compensation to reflect the performance of the companies they manage. However, past research has shown that these expectations are not universally met (Tosi et al., 2000, Frydman and Saks, 2010). To address investors', and other stakeholders', concerns related to executives' compensation, boards of directors should delegate the responsibility for setting executive compensation to a knowledgeable committee. The members of this committee should not have any personal financial interest in the remuneration decisions they are taking (Greenbury, 1995), and should help the board to set compensation in such a way that it motivates the executives, while taking the interests of the shareholders into account. In other words, the remuneration committee needs to ensure that executives are compensated fairly and responsibly (Melis et al., 2012, South Africa IOD, 2009).

The literature on good corporate governance practices suggests certain features that should govern the remuneration-setting procedure. For example, the chairperson of the committee

should be a non-executive director (Klapper and Love, 2004), as should all other members of the committee (Financial Reporting Council, 2008). We follow these suggestions in constructing remuneration committee sub-index.

Shareholders' Rights: Shareholders' rights are concerned with the shareholders' ability to take action. Shareholders can exercise their rights by voting (Bebchuk et al., 2009) on various issues, such as the appointment of directors, the approval of directors' and top executives' remuneration, and the sanctioning of other important matters related to the company, as they are brought to their attention. Deliberating and voting on these matters takes place at annual general meetings and other special meetings. Shareholders can more effectively put power behind their opinions if all shareholders have equal voting rights (based on the number of shares held by each shareholder). The literature argues that absolute control in the hands of a few might lead to agency and entrenchment problems (Adams and Ferreira, 2008). Based on this, it is expected that a company with good corporate governance should give equal rights to all shareholders, by using the one-share-one-vote principle.

However, the principle of equal voting power may not be effective if shareholders do not have enough flexibility to exercise their voting rights. To enable each shareholder to do so, a company should create a system that allows all shareholders to participate in the voting process, for example by including the use of proxy voting which allows shareholders who cannot attend meetings to appoint representatives and still make their opinion count.

Good corporate governance implies that shareholders should have the ability to remove any unfit or underperforming directors. However, when a company has a staggered board, shareholders cannot remove all board members with a single vote. The literature also indicates that the existence of a staggered board is negatively related to company performance (Bebchuk and Cohen, 2005), which may also signal weak corporate governance. The above

arguments demonstrate that the effectiveness of shareholder monitoring can be measured by various voting dimensions (Lippert and Moore, 1995).

4 Variables

This section presents the dependent, independent, and control variables used in the econometric analysis.

4.1 Dependent variable

The dependent variable in this study is company performance. Different measures of company performance exist but, generally in corporate governance studies, accounting performance and/or market valuation are used. These two measures address different aspects of performance; the first measures the historical income generated by the company, while the second is a proxy for the future value of the company for the existing set of current and potential investors.

The proxies we apply for accounting performance and market valuation are ROA and Tobin's Q, respectively. ROA is computed as operating profit before tax, divided by total assets. Tobin's Q is defined as the market value of the company's assets, that is, the book value of assets minus the book value of equity plus the market value of equity, divided by the economic replacement cost of these assets, but research has shown that a good approximation can be achieved by dividing the market value of the company's assets by the book value of assets.

4.2 Independent variable

The independent variable is measured as the percentage of "compliance" with each of the corporate governance practices, as shown in Table 3. We use five overall dimensions/sub-indices of corporate governance: board of directors, audit committee, disclosure and

transparency, remuneration committee, and shareholders' rights. We utilize annual reports for the period 2005-2009 to determine whether each statement in the checklist is true for that company. A "yes" response is given a value of one and a "no" response a value of zero. These values are added together to give the corporate governance index. All sub-indices carry equal weight in this index. The equal-weight approach is also used in similar studies (Bebchuk et al., 2009, Gompers et al., 2003).

4.3 Control variables

We recognize that company characteristics can affect both a company's financial market performance and its corporate governance practices, in different ways. Thus, we include a number of control variables. We include *company size* to control for its effect on performance and corporate governance practices. Larger companies may have better performance because they utilize economies of scale. On the other hand, larger companies may incur inefficiencies that result in poor performance (Klapper and Love, 2004). In addition, larger companies may have more resources that may allow them to adopt good practices, for example, hiring employees and consultants who are more capable of implementing good governance practices. Company size is measured by the logarithm of total assets.

We also include *leverage* because debt may affect company performance as it reduces the free cash flow (Jensen, 1986). Also, highly leveraged companies are more closely monitored by debt providers, who may put pressure on the companies to adopt good governance practices. For example, research has shown that companies with high leverage tend to disclose more information than those with low leverage (Broberg et al., 2010). Leverage is measured by the book value of total debt (short and long-term debt) divided by the market value of common stock.

Similar to previous studies (e.g. Yermack, 1996, Chen and Steiner, 2000, Garay and González, 2008), we control for *profitability* because it has a significant impact upon the market valuation, as investors accept a premium for owning more profitable companies. Therefore, we use profitability as a control variable when Tobin's Q is used as the dependent variable. Profitability is measured as operating profit before tax, divided by total assets.

We include the variable *sales growth* as a proxy for company growth, because this may influence a company's financial market performance and corporate governance practices (Black et al., 2006a). Sales growth is measured as the percentage of sales growth, on a yearly basis.

We control for *foreign ownership* because foreign investors may be willing to pay more for shares than domestic investors (Ferreira and Matos, 2008). In addition, foreign investors may prefer to invest in well-governed companies, and may influence the companies in which they invest to adopt good corporate governance practices (Balasubramanian et al., 2010, Black et al., 2006a). Foreign ownership is measured as shares held by foreign shareholders, divided by total shares outstanding at the year-end.

We include industry dummies to control for industry characteristics that might influence company performance and choice of governance practices. Finally, we include country dummies to control for the effects of country-specific characteristics.

5 Data collection and sources

This study utilizes hand-collected data on non-financial companies listed on stock markets in various Sub-Saharan African countries. We have selected companies from countries with active stock exchanges as of December 2009. We exclude South Africa, Zimbabwe, Côte d'Ivoire and Mozambique. South Africa is excluded because it differs from other Sub-Saharan African countries in terms of the size of market capitalization, the volume of shares traded

and the number of listed securities, and because of its much longer stock market history. Zimbabwe is excluded because of its hyperinflationary economic condition during the sample period for this study. Côte d'Ivoire is excluded due to the costs associated with translating information from French to English. Mozambique is excluded because they had only one company registered in 2009 and we are only able to obtain its annual reports for three years (2007-2009). Nevertheless, including Mozambique does not significantly influence the results. We exclude financial companies from our sample due to the fact that such companies are regulated by financial authorities in terms of their governance and financial reporting. Limiting this study to non-financial companies is also consistent with most other studies on the corporate governance of publicly listed companies.

Table 1 shows the population of non-financial companies listed in each of the countries used in this study, for each year of the period 2005-2009. We focus on this period because, is the most recent period during which, many Sub-Saharan African countries adopted social-economic reforms and corporate governance practices. For example, IFRS and the recommendations of the OECD Principles of Corporate Governance published in 2004 and thereafter implemented by many countries. Since the data had to be collected manually, this made it unfeasible to collect many years of data. The names of the companies listed on each stock market were obtained from the respective stock markets' websites.

<INSERT TABLE 1 HERE>

The data are based on company information included in the companies' annual reports. The annual reports were downloaded either from the companies' websites or from <http://www.africanfinancials.com>, which provides collections of annual reports for companies listed on African countries' stock markets. By only including accessible companies, we incurred a sample selection problem, since there are no known statistics on the population of all companies in the region. To address this problem, we compared our sample to other

samples of Sub-Saharan African companies from other sources. We managed to obtain information from DataStream on the total assets of companies listed in Kenya (Nairobi Stock Exchange). Based on this information, we compared the mean company size (measured by the log of the total value of assets) of the Kenyan companies included in our sample against that of the companies obtained from DataStream. Table 2 shows the results of the two-sample-mean comparison test, indicating that, on average, the companies included in our sample are statistically similar to other samples from the same population of companies.

<INSERT TABLE 2 HERE>

In their annual reports, most of the companies in our sample provide information related to the board of directors such as the number of directors, a classification into executive and non-executive directors, the names of the chairperson and chief executive officer, board committees and the composition of these committees, meetings held by the board and the committees, and profiles of the board members, including work experience, education, date of appointment to the board, and age. In addition, most of the companies provide information about shareholders and information related to the annual general meeting. This information includes the election of directors, and other shareholders' rights, such as the use of voting by proxy. However, there is some variation, both in the type and the content of the information reported by the companies.

With the exception of Tobin's Q, we manually collected financial data from the annual reports. Concerning Tobin's Q, it is important to note that it is relatively difficult to find market information for the companies listed in Sub-Saharan African countries in a single source. Due to this, we collected information related to market capitalization from three different sources, depending on availability. These sources are the DataStream database, the companies' annual reports and stock market reports. The stock market reports were obtained from individual countries' stock markets. Some stock markets prepare market reports that

provide information on the opening and closing prices of the shares traded on a daily basis. We computed the Tobin's Q based on the year-end information for each company. For those companies for which we collected information from stock market reports, we first determined each company's year-end date, and then collected information corresponding to this date from the stock market reports.

Furthermore, most of the companies in our sample prepare annual reports in the local currency. We therefore converted the financial data into US dollars, using the average exchange rate of the local currency to US dollars during the calendar year in question. We obtained these exchange rates from each country's central bank report, downloaded from the respective central bank websites.

6 Results and discussion of empirical analysis

6.1 Descriptive results

Table 3 shows the level of compliance with each of the sub-indices of "good corporate governance practices". Overall, the mean corporate governance index score across all of the sub-indices is 56.4 percent (100% would imply full compliance). This indicates that, on average, companies in Sub-Saharan African countries are still far from "perfect" in relation to what can be labeled as good corporate governance practices based on the key statements included in Table 3. The maximum observed company-level corporate governance index is 92 percent compliance, and the minimum is 15 percent. The board of directors' sub-index has a mean of 63.8 percent. This indicates that, on average, the companies have adopted 63.8 percent of what we would label as good governance practices in terms of the composition and function of their boards of directors. In particular, more than 97.5 percent of the companies separate the positions of chair of the board and CEO. Table 3 also shows that 95.2 percent of the companies have chairmen who are not executive directors. This suggests that many

companies in Sub-Saharan Africa have a clear separation of the roles of decision making (by management) and monitoring (by the board). In addition, our results indicate that about 85.0 percent of companies have boards of which at least two thirds of the members are non-executive directors. These features of Sub-Saharan boards of directors suggest that most boards have the necessary independence to monitor top management effectively. However, only a few companies have corporate governance committees (16.2 percent) and/or nominating committees (22.5 percent).

The mean value of the audit committee sub-index is 67.6 percent. More specifically, we find that 90.3 percent of the companies have an audit committee, while 85.3 percent have audit committees chaired by non-executive directors. Furthermore, our study indicates that 59.1 percent of the companies have audit committees completely made up of non-executive directors. The high scores observed for these corporate governance issues indicate that many companies in Sub-Saharan Africa are aware of good corporate governance practices related to the recruitment of audit committees.

The mean value for the disclosure and transparency sub-index is 53.6 percent. Scores for this sub-index vary greatly; the highest observed company-level score is 91.7 percent and the lowest is 11.5 percent. Many of the companies indicate their commitment to effective corporate governance, and provide additional commentaries on their financial results, but few disclose the remuneration of each director or of the CEO.

The remuneration committee sub-index has a mean of 37.4 percent compliance. This low score indicates that many companies have relatively poor corporate governance when it comes to remuneration practices. Finally, the shareholders' rights sub-index has a mean of 64.7 percent compliance. Very few companies indicate that they hold elections of all directors every year. This suggests that it not easy for shareholders to vote for a change in the whole board at once should the board, or an individual member, become ineffective or inefficient in

carrying out its or his/her duties. Many companies do allow proxies so that shareholders can be represented without attending meetings.

<INSERT TABLE 3 HERE>

In Table 4, we report the summary statistics of the non-governance variables used in the analysis. Table 4 indicates that the average company's Tobin's Q is 2.12. This shows that, on average, the market value is significantly above the book value. ROA has a mean of 14 percent and the mean of return on sales is 18 percent. This indicates that many companies in Sub-Saharan Africa perform fairly well in terms of profitability. The companies' sales growth ranges from minus 40 percent to plus 1268 percent, with an average growth of around 18 percent. Foreign ownership makes up an average of 27 percent of the outstanding shares. In other words, foreign investors control about 27 percent of the value of companies listed across Sub-Saharan Africa, indicating that they could potentially have a significant influence on these companies.

<INSERT TABLE 4 HERE>

Table 5 presents the pairwise correlation matrix for the overall corporate governance index and its sub-indices. It indicates that there are positive and significant correlations between the corporate governance index and all of its sub-indices. This is to be expected since companies that score highly on one sub-index are more likely to score highly on other sub-indices as well.

<INSERT TABLE 5 HERE>

6.2 *Association between corporate governance and company performance*

A key research question in the corporate governance and company performance literature is whether or not good corporate governance leads to higher company performance. Addressing this relationship demands that endogeneity problems are properly considered. Endogeneity

leads to biased and inconsistent parameter estimates that make reliable inferences virtually impossible (Roberts and Whited, 2011). Potential sources of endogeneity are unobservable heterogeneity, simultaneity and the possibility that the current values of the governance variables are a function of past company performance, which is labeled dynamic endogeneity (Wintoki et al., 2012).

OLS and fixed effects estimates can be affected by endogeneity problems and thus produce biased and inconsistent estimators. By using the dynamic GMM, we can reduce some of the endogeneity problems. The method is appropriate in situations where it is difficult to find instruments to alleviate such problems (Arellano and Bond, 1991; Arellano and Bover, 1995; Blundell and Bond, 1998). According to Wintoki et al. (2012), given panel data, the dynamic GMM can improve OLS and fixed effects estimates in three ways. First, it can include firm-fixed effects to account for (fixed) unobservable heterogeneity, which OLS, in particular, does not do. Second, it allows the current corporate governance to be influenced by previous realizations of, or shocks to, past performance. Third, it may be possible to use some combination of variables from the company's history as a set of valid instruments to account for simultaneity (assuming that the underlying economic process is dynamic), for example, if the current corporate governance index is related to past company performance.

Thus, we estimate our model using the dynamic panel GMM, and more specifically, we run the `xtabond2` command in Stata, developed by Roodman (2009). The method uses lagged levels from period $t-2$ of the explanatory and dependent values as instruments to control for both dynamic and simultaneous endogeneity; therefore, we treat all explanatory variables as endogenous and use their lags of two or more periods as instruments. We treat country, industry and year dummies as exogenous variables.

Table 6 shows the results of the dynamic GMM analysis. In the first column, we show the dynamic panel data estimates when company performance is measured by ROA. These results

indicate a positive and significant association between the corporate governance index and ROA ($t=2.72$, $p<0.001$). This is consistent with Klapper and Love (2004), who find that better corporate governance is associated with higher operating performance (ROA) in a sample of companies from fourteen emerging markets.

In the second column, we show the dynamic panel data estimates when company performance is measured by Tobin's Q. Here, the results indicate that there is a *negative* and significant association between the governance index and company performance ($t=-1.97$, $p>0.1$). This is contrary to other studies (e.g. Klapper and Love, 2004, Garay and González, 2008, Balasubramanian et al., 2010) that found better corporate governance to be associated with higher company valuation. These contrasting results imply that, in our sample, the association between the governance index and company performance is contingent on how company performance is measured. In Section 6.4, we investigate the nature of the negative association between corporate governance and market valuation.

<INSERT TABLE 6 HERE>

6.3 *Associations between the sub-indices and company performance*

To further examine the association between company performance and each of the corporate governance sub-index scores, we also perform a separate analysis for each sub-index. The objective of this analysis is to assess which of the five sub-indices are associated to company performance. Accordingly, in this analysis we use the percentage scores for each sub-index as the independent variables. We also include all of the control variables used to produce the results in Table 6. We present the results in Table 7.

Panel A shows the results when company performance is measured by ROA. Here, all sub-indices, with the exception of the remuneration sub-index, have a positive association with ROA. However, more importantly, only in the case of the sub-indices for the board of

directors ($t=2.27$, $p>0.05$) and the audit committee ($t=2.12$, $p>0.05$) are the associations significant. These results suggest that adopting good corporate governance practices that are related to the effectiveness of the overall board and of the audit committee can improve accounting performance.

Panel B shows the results when the dependent variable is Tobin's Q. These results indicate that all sub-indices are negatively associated to Tobin's Q, but only in the case of the audit committee sub-index is the association significant ($t=-2.09$, $p>0.05$). The finding of a negative association between the corporate governance sub-indices and Tobin's Q is consistent with the results reported in Table 6.

In summary, the overall results regarding the association between the corporate governance sub-indices and company performance suggest that not all sub-indices in our corporate governance index are equally important in explaining the association between corporate governance and company performance.

<INSERT TABLE 7 HERE>

6.4 Additional investigation of the negative association between the corporate governance index and Tobin's Q

The surprising negative association between the governance index and Tobin's Q calls for further investigation. To address this issue, in Figure 1 we present the linear movement in the means of the Tobin's Q and the corporate governance index on a yearly basis.

<INSERT FIGURE 1 HERE>

We note that there are significant yearly changes in the Tobin's Q, which increases from 2005 to 2007 and then decreases from 2007 to 2009. The graphs also indicate that, while there was a decrease in Tobin's Q in these latter years, the corporate governance index had an upward trend. The decrease in Tobin's Q from 2007 onwards coincides with the time when

the global financial crisis started to affect stock markets around the world. The combination of this observation and the negative association between Tobin's Q and the corporate governance index suggests that well-governed companies were more heavily affected by the financial crisis than were poorly governed companies. To examine this further, we perform an additional test, by dividing the overall sample into two sub-samples, according to the median of the corporate governance index: above-median companies and below-median companies. We then ran the same regression as for Tables 6 and 7. Table 8 presents the results. For brevity, we only present the coefficients of the governance indices.

<INSERT TABLE 8 HERE>

The results in Table 8 show that the negative association between corporate governance and Tobin's Q is more likely to be present in the sub-sample of better-governed companies than among the more poorly governed ones, as shown by the negative coefficients in the former sub-sample. In addition, and more importantly, the results indicate negative and significant associations between the sub-indices relating to the board of directors and the audit committeeⁱⁱⁱ and Tobin's Q in the better-governed sub-sample only. These results suggest that the better-governed companies were more severely affected by the global financial crisis. Another possible explanation for this surprising result could be that the stocks of the better-governed companies were more liquid, and the true price drop for the illiquid companies was not registered in our yearly observations of stock prices. Unfortunately, we do not have access to such liquidity data, and this should be addressed in future research.

As a robustness check of the above results, we run another similar regression by including two additional variables that represent the financial crisis and the interaction between the governance index and the financial crisis. We create a dummy variable for the financial crisis which we call CRISIS. To do this, we divide the sample into two periods: the period during the financial crisis and the non-crisis period. Since the financial crisis took

iii The board of directors and audit committee sub-indices have significant associations with performance in Table 7 as well.

effect in 2008, the financial crisis period covers the years after 2007, while the non-crisis period covers the years before 2008. The period of the financial crisis is coded as 1 and the non-crisis period as 0. In this regard, the non-crisis period is the reference category. The regression coefficient of CRISIS is interpreted as the effect on market valuation during the financial crisis compared to the non-crisis period. Therefore, a positive coefficient would indicate that during the financial crisis companies had higher market valuations, whereas a negative coefficient would indicate that during the financial crisis they had lower market valuations. Table 9 presents the results^{iv}.

<INSERT TABLE 9 HERE>

Table 9 shows the coefficient of CRISIS to be negative for most of the sub-indices and significant in the case of the board of directors sub-index. This finding suggests that the better-governed companies had lower market valuations during the financial crisis.

Table 9 indicates that the coefficient of the interaction term between governance and the financial crisis is negative for most sub-indices. More importantly, the coefficient is negative and significant for the board of directors sub-index.^v These negative signs suggest that governance is negatively associated with market valuation in the period of the financial crisis.

Since we do not have an even distribution of sample companies across countries, one weakness in our results is that a country with many observations could drive the overall results shown in Tables 6 and 7. Nigerian companies represent 27 percent of the observations in those Tables. Therefore, as a robustness check, we run a similar regression excluding Nigerian companies to test whether the results in Tables 6 and 7 still hold. The results are provided in Table 10.

<INSERT TABLE 10 HERE>

iv These results are for the better-governed companies only. We also ran a similar analysis for the more poorly governed companies but the results were not significant. For brevity, these results are not reported.

v The board of directors sub-index has significant associations with performance in Tables 7 and 8 as well.

As shown in Table 10, the results reported in Tables 6 and 7 are generally unchanged when we exclude Nigerian companies. The only considerable difference is in the coefficient of the sub-index for the board of directors, which is no longer significant when company performance is measured by ROA. Overall these results suggest, however, that the Nigerian companies are not driving the results reported in Tables 6 and 7.

6 Conclusions

This paper examines the association between Sub-Saharan African companies' compliance with good corporate governance practices and their performance. In this study, we accomplish three objectives. First, we review individual companies' corporate governance practices and construct a corporate governance index that is applicable to Sub-Saharan African listed companies. Second, we examine the associations between a company's corporate governance index score, and its accounting performance and market valuation. Third, we examine which of the sub-indices of the corporate governance index are most meaningful in explaining the aforementioned associations.

We find that companies in Sub-Saharan African countries typically comply with just over half of the "good corporate governance practices" that we include in our index. From the dynamic GMM analysis, we find that the corporate governance index score has a positive and significant association with the companies' accounting performance (ROA). On the other hand, our results indicate a surprising negative and significant association when company performance is measured by the market valuation (Tobin's Q). Further investigation indicates that the negative association is explained by the decline in overall stock prices due to the recent global financial crisis, which apparently had a stronger negative effect on better-governed companies.

In terms of the sub-indices, we find that only some of these practices have significant effects on company performance. In particular, we find that the audit committee sub-index is positively and significantly associated to company performance as measured by ROA, but that the audit committee sub-index is negatively and significantly associated to performance as measured by Tobin's Q. Also, we find that the board of directors sub-index is positively and significantly associated to performance, but only when performance is measured by ROA. The other sub-indices do not have significant effects on company performance.

The findings of our study have implications for the implementation of corporate governance practices across Sub-Saharan Africa. Assuming unchanged financial market and institutional conditions, these findings suggest that companies that comply with good corporate governance practices can expect to achieve higher accounting performance. This can also be explained, theoretically, that better governance practices lead to reduced agency costs. This implies that companies in Sub-Saharan Africa can potentially enhance their performance by adopting good corporate governance practices. However, our findings on the association between the sub-indices and company performance suggest that not all of the sub-indices of our corporate governance index are significantly associated to company performance. This implies that, given the choice, companies should take care to adopt corporate governance practices that do have significant effects on their performance. For example, those related to the board of directors and the audit committee have significant effects on company performance, particularly on accounting performance.

The finding of a negative and significant association between corporate governance practices and Tobin's Q shows how company-specific performance measures are vulnerable to exogenous events. In addition, our findings suggest that the better-governed companies in our sample were more negatively affected by the global financial crisis. This might imply that

better-governed companies are more exposed to external shocks, but it could also be due to some unobserved factors that we do not control for.

In terms of the generalizability of our study, one limitation is that we only include publicly traded companies that provide annual reports online. This approach might bias our results, as there could be certain unobservable characteristics that differentiate companies that provide such information online from those that do not. For example, companies seeking new investors may be more willing to provide their reports online. This bias needs to be taken into consideration when interpreting the findings of this study. We suggest that future studies should collect information from companies that do not provide their reports online. Given the lack of willingness of many Sub-Saharan African companies to provide such information upon request (and we did try to obtain information in this way), this might require in-person visits to companies and stock exchanges.

Our study focuses on countries that had active stock markets by the end of the year 2009. However, we do, for various reasons, exclude South Africa, Zimbabwe, Côte d'Ivoire and Mozambique. However, as part of Sub-Saharan Africa, South Africa plays a major role economically and in influencing corporate governance reforms across the region. For example, some countries in Sub-Saharan Africa have explicitly and/or implicitly adopted some governance practices from the South Africa King Reports. In this regard, we reason that it would be interesting to include South Africa in future studies; therefore, we suggest that future research should compare South Africa to other Sub-Saharan African countries

Another shortcoming of this study is that it does not address the underlying reasons why companies in Sub-Saharan Africa choose to adopt, or not adopt, good corporate governance practices. This would be an interesting issue for future research.

Appendix: Corporate governance index: compliance with “good corporate governance practices”.

Where possible we indicate the references in the existing corporate governance literature from which each statement was obtained.

	Statement	Reference
	<i>Sub-Index – Board of Directors</i>	
1	Chairperson of board and CEO two different individuals	(Black et al., 2006b, Garay and González, 2008, South Africa IOD, 2009)
2	Chairperson is non-executive director	(Klapper and Love, 2004, South Africa IOD, 2009)
3	Company indicates classes of directors	(Financial Reporting Council, 2008)
4	Non-executive directors make up at least two thirds of the board	(Arcot and Bruno, 2007)
5	Company indicates number of meetings held by board	(Financial Reporting Council, 2008)
6	Board has a corporate governance committee	
7	Board has a nominating committee	(Klapper and Love, 2004, Black et al., 2006b, Cadbury, 1992)
	<i>Sub-Index – Audit Committee</i>	
8	Company has an audit committee	(Klapper and Love, 2004, Black et al., 2006a, South Africa IOD, 2009)
9	Chairperson of committee is a non-executive director	(Klapper and Love, 2004, Balasubramanian et al., 2010, South Africa IOD, 2009)
10	All members of committee are non-executive directors	(Financial Reporting Council, 2003, Balasubramanian et al., 2010)
11	Chairperson of the board is not the chairman or a member of the committee	(Financial Reporting Council, 2010, South Africa IOD, 2009)
12	Company indicates number of meetings held by committee	(Financial Reporting Council, 2008)
	<i>Sub-Index - Disclosure and Transparency</i>	
13	Company uses IFRS	(Garay and González, 2008, Klapper and Love, 2004)
14	Company discloses composition of remuneration committee	(Renders et al., 2010)
15	Company discloses composition of audit committee	(Renders et al., 2010)
16	Company discloses total remuneration paid to each director	(OECD, 2004, Garay and González, 2008)
17	Company discloses remuneration of CEO	(Renders et al., 2010, Garay and González, 2008, OECD, 2004)
18	Company discloses work/professional qualifications of its senior officers	
19	Company discloses academic qualifications of its senior officers	
20	Company discloses remuneration of senior management team	(Renders et al., 2010, OECD, 2004)
21	Company discloses work/professional qualifications of directors	(Black et al., 2006b)
22	Company discloses academic qualifications of directors	(Black et al., 2006b)
23	Company discloses ages of directors	

	Statement	Reference
24	Company discloses date on which each director was appointed	
25	Company uses a “big four” audit firm as its external auditor	(Azizkhani et al., 2010)
26	Company releases its annual reports within 3 months of year-end	(Renders et al., 2010)
27	Company reports stock prices and stock market performance	(Renders et al., 2010)
28	Company discloses share ownership details	(Renders et al., 2010, OECD, 2004)
29	Company states its commitment to effective corporate governance	(Renders et al., 2010, Klapper and Love, 2004)
30	Company discloses a commentary on its financial results	(South Africa IOD, 2009)
31	Company discloses a summary of the five-year financial trends	(Renders et al., 2010)
32	Company reports on CSR activities	(Klapper and Love, 2004)
	<i>Sub-Index – Remuneration Committee</i>	
33	Company has a remuneration committee	(Arcot and Bruno, 2007, Garay and González, 2008, Klapper and Love, 2004, South Africa IOD, 2009)
34	Chairperson of committee is a non-executive director	(Klapper and Love, 2004)
35	All members of committee are non-executive directors	(Financial Reporting Council, 2010)
36	Company indicates number of meetings held by committee	(Financial Reporting Council, 2008)
	<i>Sub-Index - Shareholders’ Rights</i>	
37	Company uses one-share-one-vote principle	(Renders et al., 2010)
38	Company elects all directors every year	
39	Company indicates that it allows proxy voting	(Renders et al., 2010, OECD, 2004)

Table 1: Summary unbalanced panel data of observations by country and year

	Years					Total	Number of non-financial companies listed as of Dec 2009	2009 sample as % of all non-financial companies as of Dec 2009
	2005	2006	2007	2008	2009			
Botswana	6	8	7	10	10	41	11	91 %
Ghana	5	6	6	10	5	32	23	22 %
Kenya	11	15	19	22	20	87	30	67 %
Malawi	2	3	4	5	5	19	6	83 %
Mauritius	7	13	13	17	17	67	28	61 %
Namibia	2	2	2	2	2	10	3	67 %
Tanzania	1	3	4	5	3	16	7	43 %
Uganda	3	3	3	3	3	15	3	100 %
Zambia	6	6	6	7	7	32	14	50 %
Nigeria	18	20	30	26	21	115	161	13 %
Total	61	79	94	107	93	434	286	33 %

Table 2: Comparison of data from DataStream against our sample data

	Kenyan companies (DataStream)			Kenyan companies (our dataset)			t-test
	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	
Log total assets	7.99	0.700	18	8.062	0.654	22	0.336

Table 3: Corporate governance index

N	Statement	Average
	<i>Sub-Index – Board of Directors</i>	63.8
1	Chairperson of board and CEO are two different individuals	97.5
2	Chairperson is a non-executive director	95.2
3	Company indicates classes of directors	91.0
4	Non-executive directors make up at least two thirds of the board	85.0
5	Company indicates number of meetings held by board	39.4
6	Board has a corporate governance committee	16.2
7	Board has a nominating committee	22.5
	<i>Sub-Index – Audit Committee</i>	67.6
8	Company has an audit committee	90.0
9	Chairperson of committee is a non-executive director	85.0
10	All members of committee are non-executive directors	59.1
11	Chairperson of the board is not the chairman or a member of the audit committee	65.6
12	Company indicates number of meetings held by committee	38.2
	<i>Sub-Index - Disclosure and Transparency</i>	53.6
13	Company use IFRS	74.3
14	Company discloses composition of remuneration committee	47.1
15	Company discloses composition of audit committee	78.9
16	Company discloses total remuneration of each director	11.5
17	Company discloses remuneration of CEO	14.8
18	Company discloses work/professional qualifications of its senior officers	15.0
19	Company discloses academic qualifications of its senior officers	18.9
20	Company discloses remuneration of senior management team	46.5
21	Company discloses work/professional qualifications of directors	46.7
22	Company discloses academic qualifications of directors	43.6
23	Company discloses ages of directors	25.6
24	Company discloses date on which each director was appointed	34.4
25	Company uses a “big four” audit firm as external auditor	80.4
26	Company releases its annual reports within 3 months of year-end	65.6
27	Company reports stock prices and stock market performance	43.0
28	Company discloses share ownership	87.8
29	Company states its commitment to effective corporate governance	91.7
30	Company discloses a commentary on its financial results	91.7
31	Company discloses a summary of five-year financial trends	73.9
32	Company reports on CSR activities	80.8
	<i>Sub-Index – Remuneration Committee</i>	37.4
33	Company has a remuneration committee	49.4
34	Chairperson of committee is a non-executive director	46.2
35	All members of the committee are non-executive directors	29.3
36	Company indicates number of meetings held by committee	24.7
	<i>Sub-Index - Shareholders' Rights</i>	64.7
37	Company uses one-share-one-vote principle	99.5
38	Company elects all directors every year	6.5
39	Company indicates that it allows proxy voting	88.2
	AVERAGE CORPORATE GOVERNANCE INDEX	56.4

Table 4: Summary statistics of non-governance variables

Variable	Mean	St.Dev.	Min.	Max.
Tobin's Q	2.12	1.86	0.46	13.04
Return on assets (ROA)	0.14	0.17	-0.69	0.96
Size	7.84	0.93	0	9.38
Leverage	0.92	1.71	0	22.16
Sales growth	0.18	0.81	-0.40	12.68
Foreign ownership	0.27	0.32	0.00	1.00

Table 5: Correlation matrix between corporate governance index and its sub-indices

Description	Corporate governance index	Board of directors index	Audit committee index	Disclosure and trans. index	Remuneration committee
Corporate governance index	1				
Board of directors index	0.730***	1			
Audit committee index	0.705***	0.485***	1		
Disclosure and trans. Index	0.925***	0.574***	0.489***	1	
Remuneration committee index	0.813***	0.516***	0.515***	0.670***	1
Shareholders' rights index	0.312***	0.209***	0.216***	0.245***	0.135***

*** (**) (*) denotes significance at the 0.01 (0.05) (0.10) level

Table 6: Relation between corporate governance index and company performance

<i>Dependent variable</i>	ROA	Tobin's Q
Corporate governance index	0.510*** (2.72)	-4.095* (-1.97)
Size	-0.020 (-0.21)	-1.645 (-1.06)
Leverage	0.003 (0.09)	0.272 (1.51)
Profitability (ROA)		3.661 (1.44)
Growth	-0.021 (-0.83)	0.379 (1.03)
Foreign ownership	0.039 (0.32)	1.077 (0.67)
ROA t-1	0.644*** (3.04)	
Tobin's Q t-1		0.047 (0.24)
AR(1) test (p-value)	0.08	0.04
AR(2) test (p-value)	0.58	0.51
Hansen test of over-identification (p-value)	0.90	0.96
Observations	307	273

Dynamic panel data estimates are reported with t-statistics in parentheses. The explanatory variables are treated as endogenous using all lags back from period t-2 as instruments. Country, industry and year dummies are used as exogenous variables. A “collapse” option to limit instrument proliferation and two-step robust standard errors are used.

AR (1) and AR (2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null hypothesis of no serial correlation. The Hansen test of over-identification is carried out under the null hypothesis that all instruments are valid. *** (**) (*) denotes significance at the 0.01 (0.05) (0.10) level.

Table 7: Relation between corporate governance sub-indices and company performance

<i>Panel A: Dependent variable (ROA)</i>	Board of directors	Audit committee	Disclosure and transparency	Remuneration committee	Shareholders' rights
Coefficient of sub-index	0.215** (2.27)	0.152** (2.12)	0.673 (1.20)	0.016 (0.17)	0.275 (1.26)
Size	0.006 (0.05)	0.021 (0.25)	0.037 (0.22)	-0.060 (-0.66)	-0.061 (-0.43)
Leverage	0.014 (0.57)	0.003 (0.10)	-0.018 (-0.63)	0.007 (0.10)	-0.001 (-0.02)
Growth	-0.002 (-0.05)	-0.019 (-0.48)	-0.029 (-0.86)	-0.010 (-0.27)	-0.023 (-0.47)
Foreign ownership	0.037 (0.24)	0.091 (0.99)	-0.044 (-0.28)	0.011 (0.08)	0.007 (0.05)
ROA t-1	0.602** (2.34)	0.549** (2.19)	0.620* (1.98)	0.489** (2.15)	0.578** (2.30)
AR(1) test (p-value)	0.04	0.06	0.14	0.18	0.08
AR(2) test (p-value)	0.93	0.90	0.54	0.84	0.61
Hansen test of over-identification (p-value)	0.67	0.73	0.89	0.67	0.86
Observations	307	307	307	307	307
<i>Panel B: Dependent variable (Tobin's Q)</i>	Board of directors	Audit committee	Disclosure and transparency	Remuneration committee	Shareholders' rights
Coefficient of sub-index	-2.016 (-1.27)	-1.604** (-2.09)	-3.974 (-0.88)	-1.234 (-1.22)	-2.463 (-0.65)
Size	-1.771 (-1.28)	-1.347 (-1.57)	-1.948 (-1.30)	-0.267 (-0.33)	-1.242 (-1.32)

Leverage	0.178 (1.44)	0.038 (0.20)	0.337 (1.28)	0.212* (1.69)	0.315 (1.27)
Profitability (ROA)	1.878 (0.90)	2.532 (0.98)	2.466 (0.76)	3.769 (1.56)	2.565 (0.82)
Growth	0.092 (0.16)	0.116 (0.24)	0.334 (0.65)	0.269 (0.58)	-0.019 (-0.03)
Foreign ownership	0.861 (0.61)	0.948 (0.80)	1.811 (0.99)	0.575 (0.36)	1.995 (1.19)
Tobin's Q t-1	0.282 (1.36)	0.163 (0.94)	-0.005 (-0.02)	0.221 (1.13)	0.225 (1.09)
AR(1) test (p-value)	0.04	0.02	0.11	0.02	0.03
AR(2) test (p-value)	0.76	0.53	0.54	0.85	0.57
Hansen test of over-identification (p-value)	0.91	0.78	0.93	0.67	0.83
Observations	273	273	273	273	273

Dynamic panel data estimates are reported with t-statistics in parentheses. The explanatory variables are treated as endogenous using all lags back from period t-2 as instruments. Country, industry and year dummies are used as exogenous variables. A “collapse” option to limit instrument proliferation and two-step robust standard errors are used.

AR (1) and AR (2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null hypothesis of no serial correlation. The Hansen test of over-identification is carried out under the null hypothesis that all instruments are valid. *** (**) (*) denotes significance at the 0.01 (0.05) (0.10) level.

Table 8: Difference in the association between corporate governance and market valuation between the better- and worse-governed companies

<i>Dependent variable (Tobin's Q)</i>	Overall sample	Sub-sample	
		Better-governed companies	Worse-governed companies
Corporate governance index	-4.095* (-1.97)	-4.998 (-1.09)	3.793 (1.39)
Board of directors sub-index	-2.016 (-1.27)	-4.462* (-1.83)	4.458 (0.77)
Audit committee sub-index	-1.604** (-2.09)	-1.746* (-1.80)	0.639 (0.44)
Disclosure and transparency sub-index	-3.974 (-0.88)	-3.104 (-0.94)	0.213 (0.04)
Remuneration sub-index	-1.234 (-1.22)	-0.720 (-0.62)	-0.183 (-0.13)
Shareholders' rights sub-index	-2.463 (-0.65)	0.799 (0.27)	-0.147 (-0.02)

This table shows the coefficients of the governance indices. t-statistics are given in parentheses. *** (**)

(*) denotes significance at the 0.01 (0.05) (0.10) level.

Table 9: Effect of financial crisis on the association between corporate governance and market valuation

Dependent variable: Tobin's Q	Corporate governance index	Board of directors	Audit committee	Disclosure and transparency	Remuneration committee	Shareholders' rights
Coefficient of governance index/ sub-index	-4.265* (-1.88)	-4.352** (-2.27)	-2.419* (-1.89)	-1.877 (-0.76)	1.018 (1.15)	-1.407 (-0.57)
CRISIS	-2.492 (-1.30)	-3.613** (-2.05)	-2.483 (-1.16)	-1.418 (-0.65)	0.163 (0.20)	-2.404 (-1.47)
Governance*CRISIS	-3.286 (-1.18)	-4.244* (-1.89)	-2.585 (-1.11)	-1.893 (-0.56)	0.862 (0.93)	-3.281 (-1.35)
Size	0.144 (0.20)	-0.534 (-1.65)	-0.635 (-0.75)	-0.0272 (-0.05)	0.546 (0.62)	-0.166 (-0.35)
Profitability	2.940** (2.65)	2.277*** (4.45)	1.374 (0.33)	2.031*** (3.95)	3.565 (1.61)	3.859 (1.49)
Leverage	0.109 (0.34)	0.141** (2.42)	0.094 (0.45)	0.364 (1.16)	0.042 (0.20)	0.081 (0.40)
Growth	0.246 (0.57)	0.039 (0.07)	-1.181 (-1.31)	-0.016 (-0.05)	0.144 (0.36)	0.186 (0.35)
Foreign ownership	-1.258 (-0.78)	0.354 (0.40)	-0.212 (-0.13)	0.493 (0.44)	0.740 (0.49)	1.484 (0.58)
Tobin's Q t-1	0.088 (0.35)	0.209* (1.69)	0.292 (1.16)	0.201 (1.23)	0.268 (1.30)	0.244 (1.28)

AR(1) test (p-value)	0.02	0.04	0.07	0.02	0.03	0.02
AR(2) test (p-value)	0.22	0.58	0.69	0.59	0.66	0.70
Hansen test of over-identification (p-value)	0.69	0.68	0.86	0.47	0.39	0.40
Observations	163	138	166	169	153	241

Dynamic panel data estimates are reported with t-statistics in parentheses. The explanatory variables are treated as endogenous using all lags back from period t-2 as instruments. Country, industry and year dummies are used as exogenous variables. A “collapse” option to limit instrument proliferation and two-step robust standard errors are used.

AR (1) and AR (2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null hypothesis of no serial correlation. The Hansen test of over-identification is carried out under the null hypothesis that all instruments are valid. *** (**) (*) denotes significance at the 0.01 (0.05) (0.10) level.

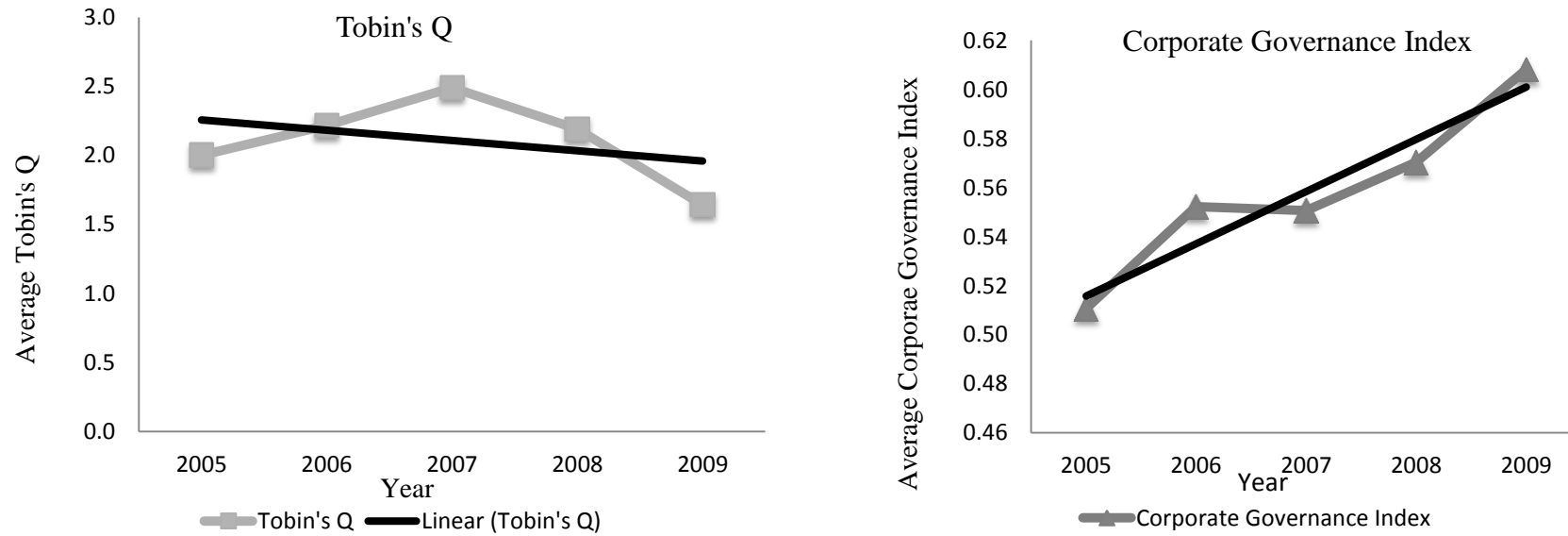
Table 10: Relation between corporate governance and company performance - excluding Nigerian listed companies

<i>Dependent variable: ROA</i>	Corporate governance index	Board of directors	Audit committee	Disclosure and transparency	Remuneration committee	Shareholders' rights
Coefficient of governance index/ sub-index	0.512** (2.27)	0.236 (1.03)	0.158** (2.04)	0.283 (0.64)	0.115 (0.80)	0.090 (0.64)
ROA t-1	0.885*** (7.18)	0.737*** (3.86)	0.715*** (3.99)	0.767*** (3.04)	0.772*** (4.68)	0.650*** (3.56)
Size	0.055 (0.61)	0.067 (1.01)	0.043 (0.66)	0.063 (0.63)	0.043 (0.85)	0.049 (0.55)
Leverage	-0.014 (-0.61)	-0.017 (-0.78)	-0.019* (-1.86)	-0.023* (-1.72)	-0.009 (-0.41)	-0.019 (-1.05)
Growth	-0.039 (-0.92)	-0.015 (-0.29)	-0.049 (-1.37)	-0.056 (-1.05)	-0.015 (-0.45)	-0.053 (-0.90)
Foreign ownership	0.097 (0.81)	0.041 (0.79)	0.091 (1.23)	0.038 (0.25)	0.142 (0.75)	0.024 (0.20)
AR(1) test (p-value)	0.04	0.06	0.03	0.08	0.03	0.03
AR(2) test (p-value)	0.41	0.79	0.62	0.59	0.58	0.64
Hansen test of over-identification (p-value)	0.98	0.80	0.98	0.91	0.92	0.91
Observations	229	229	229	229	229	229
<i>Dependent variable: Tobin's Q</i>	Corporate governance index	Board of directors	Audit committee	Disclosure and transparency	Remuneration committee	Shareholders' rights
Coefficient of governance index/ sub-index	-2.973* (-1.87)	-2.274 (-1.09)	-1.735* (-1.82)	-2.693 (-0.92)	-1.607 (-1.17)	-1.199 (-0.59)

Size	-1.333** (-2.33)	-1.606 (-1.21)	-1.010 (-1.38)	-0.879 (-0.91)	-1.918* (-1.92)	-1.347* (-1.91)
Leverage	0.251 (1.44)	0.211* (1.98)	0.172 (1.57)	0.253 (1.37)	0.324* (1.79)	0.265* (1.69)
Profitability	2.938 (1.31)	1.974 (1.37)	2.606 (1.62)	2.569 (1.54)	2.934* (1.69)	2.693** (1.98)
Growth	0.008 (0.02)	-0.058 (-0.19)	0.120 (0.43)	-0.016 (-0.04)	0.232 (0.65)	0.026 (0.07)
Foreign ownership	1.774 (1.10)	1.262 (0.89)	0.404 (0.35)	2.059 (1.20)	1.891 (1.19)	1.442 (1.17)
Tobin's Q t-1	0.270 (1.58)	0.296* (1.72)	-0.003 (-0.07)	0.224 (1.27)	0.256 (1.22)	0.243 (1.66)
AR(1) test (p-value)	0.03	0.05	0.03	0.05	0.03	0.04
AR(2) test (p-value)	0.74	0.71	0.53	0.79	0.64	0.68
Hansen test of over-identification (p-value)	0.74	0.86	0.72	0.53	0.93	0.83
Observations	204	204	204	204	204	204

t-statistics in parentheses. *** (**) (*) denotes significance at the 0.01 (0.05) (0.10) level

Figure 1: Graphical presentation of changes in Tobin's Q and corporate governance index



Trends in the mean values of Tobin's Q and the corporate governance index during the period 2005-2009. The linear fitted graphs indicate an overall decrease in Tobin's Q but an upward trend in the corporate governance index during the sample period.

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