Monitoring Board Committee Structure and Market Valuation in Large Publicly Listed South African Corporations

Collins G. Ntim[1]

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School of Management
University of Southampton
Southampton, UK

[1] Corresponding author. Address for correspondence: Centre for Accounting, Accountability and Governance, School of Management, University of Southampton, Building 2, Southampton, SO17 1BJ, UK. Tel: +44 (0) 238 059 8612. Fax: +44 (0) 141 330 4442. E-mail: c.g.ntim@soton.ac.uk or cgyakari@yahoo.com.

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Abstract

We examine the association between the presence of monitoring board committees (i.e., audit, nomination, and remuneration) and market valuation in South Africa using a sample of listed corporations. We find a significant positive connection between the presence of monitoring board committees and market valuation, but only in corporations that have independent monitoring board committees and/or all three monitoring board committees that we have investigated simultaneously. This implies that the market values corporations with independent and/or the three monitoring board committees more highly. Our results provide empirical support for agency theory, which indicates that the presence of independent board committees increases the capacity of corporate boards to effectively advise, monitor and discipline top management, and thereby improving market valuation.

Keywords: corporate governance; monitoring board committees; market valuation; endogeneity; South Africa.

1. Introduction

In this paper, we examine the connection between the presence of monitoring board committees and market valuation using a sample of large publicly listed corporations in South Africa (SA). SA has pursued corporate governance (CG) reforms, mainly in the shape of the 1994 and 2002 King Reports (Rossouw et al., 2002; Andreasson, 2012). Generally, the King Reports have focused on improving CG standards in SA (Rossouw, 2005; Mangena and Chamisa, 2008). More precisely, however, the reforms have focused on enhancing market value by improving the capacity of corporate boards to effectively advise, monitor and discipline corporate executives (West, 2006, 2009). One way of measuring a corporate board's capacity to effectively perform their advising, monitoring and disciplining role is the presence of independent board committees, such as audit, nomination and remuneration committees (Lipton and Lorsch, 1992; Jensen, 1993).

Harrison (1987) suggests there are two main types of board committees: monitoring/oversight and advising/operating. Advising/operating board committees, such as executive, finance, production, marketing, safety, health and environment, and information technology, amongst others, advise management and the board on major business decisions. By contrast, their monitoring counterparts, such as audit, nomination, and remuneration are intended to protect shareholder interests by providing objective and independent assessment of executive decisions and actions.

A number of advantages exist for having board committees, and in particular monitoring ones. For example, and due to their relative small size, monitoring board committees are able to meet more frequently (Vefeas, 1999a, b; Chhaochharia and Grinstein, 2009). This provides sufficient time for meaningful dialogue and in reaching

consensus decisions quicker (Dulewicz and Herbert, 2004; Karamanou and Vefeas, 2005). Similarly, and by their composition[1], board committees help in bringing individual director's specialist knowledge and expertise to bear on the board decision-making process (Harrison, 1987; Carcello et al., 2002). This also allows the main board to devote attention to specific areas of strategic interests and responsibility (Klein, 1998; Sun and Cahan, 2009). Thus, having independent monitoring board committees can improve firm valuation by enhancing the capacity of corporate boards in reducing the number of avenues by which opportunistic managers can expropriate corporate resources through greater monitoring.

SA provides an interesting setting to investigate the link between the presence of monitoring board committees and market valuation. In line with other Anglo-Saxon countries, SA has carried out CG reforms in the shape of the King Reports. With particular respect to monitoring board committees and as will be discussed further, the King Reports recommend that SA corporations should at least set-up audit, nomination and remuneration committees in order to enhance the effectiveness of the board to advise, monitor and discipline top management. This suggests that the King Reports perceive the presence of independent monitoring board committees as a good CG practice. Consequently, the main aim of this paper is to investigate the connection between the presence of monitoring board committees and market valuation in SA, and thereby making a number of new contributions to the existing literature.

First, using a sample of SA listed corporations, we offer evidence on the effect of monitoring board committees on market valuation. This constitutes one of the first

[1]Unlike the main board, directors with specialist knowledge and expertise normally constitute board committees. The King Reports suggest, for example, that a majority of the audit committee members must be financially literate and preferably with practical financial management experience.

attempts at estimating the impact of monitoring board committees on market valuation within a Sub-Saharan African context, with particular focus on SA, and thus crucially extends the literature to that sub-continent. This also contributes to the largely advanced countries-based literature on the connection between monitoring board committees and market valuation. Second, we innovatively demonstrate that monitoring board committees have a positive effect on market valuation, but only in corporations that have independent board committees and/or have established all three monitoring board committees. Finally, and distinct from most previous studies, we apply econometric models that sufficiently control for different types of endogeneities and market valuation proxies.

The rest of the paper is structured as follows. Section 2 focuses on CG reforms and the SA corporate setting. Section 3 presents the literature review. Section 4 describes the data. Section 5 contains the empirical analyses, whereas section 6 concludes.

2. CG policy reforms, monitoring board committees and the SA corporate setting

Although CG has long been in SA in the form of the 1861 Companies Act, there is a general consensus that the introduction of the King Reports explicitly institutionalised CG practices in SA (West, 2006, 2009; Andreasson, 2012). This began with the publication of the first King Report (King I) in 1994 (King Committee, 2002; Managena and Chamisa, 2008). The recommendations of King I were largely influenced by those of the powerful 1992 UK Cadbury Report (Rossouw, 2005; Andreasson, 2012). For instance, and in line with the Cadbury Report, King I recommended an Anglo-Saxon style unitary board of directors, constituted by executive and non-executive directors,

who operate within a voluntary ('comply or explain') compliance CG regime (Cadbury Committee, 1992; King Committee, 2002).

With particular regard to monitoring board committees, and similar to the Cadbury Report, King I outlined their role in helping the board to effectively advise, monitor and discipline top management (King Committee, 1994; Ntim, 2009, 2011). However, King I suffered from several limitations. First, and different from the Cadbury Report, which recommended that companies should at least set-up audit, nomination and remuneration committees, King I only required SA corporations to set-up only audit and remuneration committees (Rossouw et al., 2002; West, 2006, 2009), excluding the need for the establishment of a nomination committee. Such a committee would have nominated new independent directors for appointment to the board, which would have arguably improved board independence. Arguably, this undermined board functions, where true independence from management was required (King Committee, 2002).

Second, King I was unable to insist on a truly independent non-executive director to chair SA corporate boards (West, 2006, 2009). This deviation from Cadbury also impaired board independence and increased potential conflicts of interests (Ntim et al., 2012a, b). Third, and while King I called for the establishment of a remuneration committee, it failed to establish the economic rationale or specific rules that should guide corporations in determining the level of their directors' remuneration. In this case, it failed to sway away the concerns of shareholders and the general public about director and executive remuneration (King Committee, 2002; Rossouw, 2005). These deviations from the Cadbury Report arguably weakened the effectiveness of monitoring board committees under King I (King Committee, 2002; Ntim et al., 2012a, b).

As a result, King I was revised and replaced with a second King Report (King II) in 2002 with the objective of addressing some of the limitations of King I. King II made a number of new recommendations with particular regard to monitoring board committees. First, it suggested that every SA firm should at least set-up audit, nomination and remuneration committees. Second, it provided a clear definition of independence and clearly grouped directors into executive, non-executive and independent non-executive directors (King Committee, 2002; Ntim, 2009). Third, and most importantly, King II did not only recommend that monitoring board committees should consist of a majority of independent non-executive directors, but also the chairman of each monitoring board committee should additionally be an independent non-executive director (King Committee, 2002; Andreasson, 2012). Arguably, this enhanced the independence and monitoring capacity of board committees under King II than King I.

However, the SA corporate context has unique features of greater block and institutional ownerships, mainly in the shape of tall pyramidical structures and complicated cross-shareholdings, but shareholder activism, as well as the capacity to implement and enforce of corporate regulations are observably weak (West, 2006; Ntim, 2012a, b). Therefore, critical concerns have been raised as to whether, given the SA corporate setting, a voluntary compliance CG regime like King II will be effective in improving CG standards by enhancing the capacity of corporate boards to effectively advise, monitor and discipline top management (Rosssouw et al., 2002). Hence, this paper seeks to examine whether the recommendations of the King Reports with specific regard to monitoring board committees has any impact on market valuation in SA.

3. Literature review: Theory, evidence and the development of hypothesis

Prior literature suggests that board committees help improve the effectiveness and efficiency of corporate boards (Dalton et al., 1998; Jiraporn et al., 2009). As previously explained, and according to Harrison (1987) there are two generic types of board committees: monitoring/oversight and advising/operating. Advising/operating board committees advise management and the board on major business decision. Their monitoring counterparts are intended to protect shareholder interests by providing objective and independent review of executive decisions and actions.

Agency theory suggests that a central monitoring function of the board is to ensure that corporate activities are properly audited (Jensen and Meckling, 1976; Fama and Jensen 1983a). It also includes ensuring that directors and senior management are adequately remunerated, and to nominate qualified individuals for appointment to fill director and top management positions (Chhaochharia and Grinstein, 2009; Jiraporn et al., 2009). As a corollary, there has been a dramatic increase in the use of monitoring board committees over the last three decades (Harrison, 1987; Daily et al., 2003). Key among them is audit, remuneration and nomination committees. In fact, almost every CG code of the modern era has called for the institution of these board committees (Cadbury Report, 1992; King Reports, 1994, 2002).

Despite their increasing popularity, however, there are still conflicting theoretical propositions as to the nexus between monitoring board committees and market valuation. One line of the theoretical literature suggests that the establishment of these committees can impact positively on market valuation (Harrison, 1987; Wild, 1994; Sun and Cahan, 2009). First, and unlike the main board or operating committees, such as finance and executive committees, monitoring board committees are usually entirely composed of

independent non-executive (NEDs), making them better placed to protect shareholders' interests by effectively scrutinising managerial actions (Klein, 1998; Vefeas, 1999b).

Second, and by their relative small size, board committees are able to meet more frequently. This provides sufficient time for meaningful dialogue and in reaching consensus decisions quicker (Weir et al., 2002; Karamanou and Vefeas, 2005). Third, and by their composition, board committees help in bringing individual director's specialist knowledge and expertise to bear on the board decision-making process (Harrison, 1987; Dalton et al., 1998). This also allows the main board to devote attention to specific areas of strategic interests and responsibility.

Finally, board committees enhance corporate accountability, legitimacy and credibility by performing specialist functions (Goodstein et al., 1994; Weir et al., 2002). The principal function of the audit committee, for example, is to meet regularly with the firm's external and internal auditors to review the company's financial statements, audit processes and internal accounting controls. This helps reduce agency costs and information asymmetry by facilitating timely release of unbiased accounting information by managers to shareholders (Wild, 1994; Klein, 1998). Also, effective monitoring by the audit committee may help minimise financial fraud and increase firm value.

The remuneration committee determines and reviews the nature and amount of all compensation for directors and senior officers of the firm. This also helps in reducing the agency problem by implementing remuneration schemes and incentives designed to better align the interests of managers and shareholders (Klein, 1998; Weir and Laing, 2000). The nomination committee is responsible for nominating candidates for appointment to the board. This minimises the agency conflict by improving board

independence and the quality of appointed directors (Vefeas and Theodorou, 1998; Vefeas, 1999b).

By contrast, others suggest board committees can impact negatively on market valuation. First, the establishment of board committees imposes extra costs in terms of managerial time, travel expenses and additional remuneration for the members of the committees (Vefeas, 1999a; Chhaochharia and Grinstein, 2009). Second, it can result in excessive managerial supervision, which can inhibit executive initiative and vision (Goodstein, et al., 1994; Conger et al., 1998; Vefeas, 1999a, b). Third, it may also result in duplicating corporate board duties and responsibilities. This will have additional costs implications for firms. Finally, and by creating generalists and specialists among board members, board committees have the potential of generating conflicts in ideas and impairing boardroom cohesion (Weir and Laing, 2000; Carcello et al., 2002).

The empirical literature regarding the association between the presence of monitoring board committees and market valuation is still at its embryonic stage (Dalton et al., 1998; Laing and Weir, 1999). The little available evidence also largely focuses on developed markets, such as the UK and the US. This makes generalisation difficult. Further, the limited evidence offers contradictory conclusions. This makes board committee structures a fertile area for further research, especially within a developing country context. It may help shed additional insights on the monitoring board committee structure-market valuation relationship. The results can also be compared with previous international studies on monitoring board committees.

In line with the theoretical literature, a strand of the empirical literature suggests a positive connection between the presence of monitoring board committees and market

valuation (Wild, 1994; Chhaochharia and Grinstein, 2009; Sun and Cahan, 2009). Wild (1994) examines market reaction before and after the establishment of audit committees by a sample of 260 US firms from 1966 to 1980. He reports a statistically significant improvement in share returns following the establishment of audit committees, which suggests that the presence of audit committees can enhance managerial accountability to shareholders. Recent evidence by Vefeas and Karamanous (2005) in 275 Fortune 500 firms is consistent with the findings of prior research that suggests that the presence of audit committees is positively associated with market valuation.

Using a sample of 606 large US listed corporations, Vefeas (1999b) documents a positive relationship between the establishment of nomination committees and the quality of new director appointments. This implies that nomination committees can improve board quality, which may ultimately improve the effectiveness with which the board carries out its monitoring and advisory roles. In separate studies, but using samples of US listed firms, Chhaochharia and Grinstein (2009) and Sun and Cahan (2009) report a significant decrease in CEO compensation for US firms with independent compensation committees compared with those without compensation committees. This suggests that the establishment of independent compensation committees is associated with better monitoring of managerial compensation.

Of special interest to this study, Mangena and Chamisa (2008) find in a sample of 81 SA listed firms that the presence of an audit committee significantly reduces the possibility of a firm being suspended from the stock exchange. This indicates that the presence of audit committees improve internal monitoring, reduce internal fraud and enhance compliance with corporate regulations.

By contrast, others have offered evidence, which shows that the presence of board committees impact negatively on market valuation (Main and Johnston, 1993; Vefeas, 1999a). In a sample of 220 large British listed corporations, Main and Johnston (1993) examine the role of remuneration committees in British boardrooms. They report that the presence of a remuneration committee is associated with higher executive pay, which reduces shareholder value. Similarly, using 307 US listed firms from 1990 to1994, Vefeas (1999a) reports a negative relationship between the establishment of board committees (namely, audit, remuneration, and nomination) and firm value.

A third stream of studies suggests no empirical relationship between board committees and market valuation (Klein, 1998; Vefeas and Theodorou, 1998; Laing and Weir, 1999). Using a sample of 486 US firms over the period 1992-1993, Klein (1998) examines the association between the presence of audit, compensation, and nomination committees and market valuation, but finds no statistically significant relationship. Further, she demonstrates that her result is robust irrespective of the changes in the composition of the committees' membership. Vafeas and Theodorou (1998) investigate the impact of audit, remuneration and nomination committees on the market valuation of 250 UK listed firms in 1994. They find no evidence in favour of the idea that the existence of the three board committees significantly affected market valuation. Recently, Weir and Laing (2000), Weir et al. (2002), Dulewicz and Herbert (2004), and Bozec (2005) provide evidence, which shows that the establishment of the three board committees has no significant impact on market valuation.

Despite the conflicting empirical evidence, and as has been discussed in section 2, the King Reports require SA listed corporations to institute audit, remuneration, and

nomination committees. They specify that each committee should be chaired by an independent NED. They must also be composed either entirely of independent NEDs (in the case of the remuneration committee) or by a majority of independent NEDs (in the case of audit and nomination committees). Further, the audit committee members must be financially literate and should be chaired by a person other than the chairperson of the board. This suggests that the King Reports expect that the establishment of monitoring board committees may directly or indirectly impact positively on market valuation, and thus our main hypothesis is that:

H_1: There is a statistically significant and positive relationship between the presence of audit, nomination and remuneration committees, and market valuation.

4. Data

Due to capital structure and regulatory reasons, 291 corporations listed on the JSE as at 31/12/2007 from eight non-financial industries (basic materials, consumer goods, consumer services, health care, industrials, oil and gas, technology, and telecoms) were sampled. We use CG and financial variables to investigate the impact of monitoring board committees on market valuation. The CG variables were extracted from the annual reports of the sampled corporations'. The annual reports were downloaded from the *Perfect Information Database*. The financial data were taken from *Datastream*. The corporations in our final sample had to meet two criteria. First, a corporation's complete 5-year annual reports from 2002 to 2006 inclusive are available. Second, the

corporation's corresponding financial data from 2003 to 2007 is also available.[2] Applying the above criteria, the complete data needed is obtained for a total of 169 firms over 5-firm years and 8 industries for our regression analysis.

5. Empirical analyses

5.1 *Summary descriptive statistics*

Table 1 presents complete definitions and summary statistics of all (market valuation, CG and control) variables that we use in estimating our regressions. Table 1 shows, for example, that *Q*, which is our main (although as a sensitivity check, we employ *ROA* and *TSR* as alternative market valuation proxies) market valuation measure, is between a minimum of 0.72 and a maximum of 3.60 with a median of 1.34. The *ALCOM* (*NCOM*) ranges from a minimum of 0% (0%) to a maximum of 100% (100%) with a mean of 45% (47%). The alternative market valuation variables (*ROA* and *TSR*), and the control variables (*BIG4*, *CAPX*, *CGCO*, *CSLIST*, *GOWN*, and *SGR*), which we include in our regressions in order address potential omitted variables bias, also show wide variations. This implies that our sample has been sufficiently selected to obtain adequate variation, and thus minimises any possibilities of sample selection bias.

Insert Table 1 about here

5.2 *Multivariate regression analyses*

Corporations tend to differ in the difficulties and prospects that they encounter over-time. This may lead to a situation whereby monitoring board committee structure

[2]It takes time for board decisions to reflect in market value (Boyd, 1995; Ntim, 2011, 2012a, b; Ntim et al., 2012a, b). Therefore, to avoid endogenous association between the presence of monitoring board committees and market valuation, we introduce a one year lag between the presence of monitoring board committee structure and market valuation such that this year's market value depends on last year's CG structure, as specified in equation (1) below.

and *Q* are jointly and dynamically determined by firm-specific differences, such as company complexity, managerial talent and corporate culture (Guest, 2009; Ntim, 2009, 2011, 2012a, b), which simple ordinary least square regressions may fail to identify (Gujarati, 2003; Petersen, 2009; Wooldridge, 2010), and thereby resulting in misleading findings. Hence, given the panel nature of our data and in line with previous studies (Henry, 2008; Guest, 2009; Ntim, 2011, 2012a, b; Ntim et al., 2012a, b), we conduct fixed-effects regressions in order to control for unobserved firm-specific heterogeneities. As such, we begin our analysis with a simple fixed-effect regression specified as follows:

$$Q_{it} = \alpha_0 + \beta_1 BCOM_{it-1} + \sum_{i=1}^{n} \beta_i CONTROLS_{it-1} + \delta_{it-1} + \varepsilon_{it-1} \quad (1)$$

where: *Q* is the main dependent variable, *BCOM* is the main independent variable referring to either *ACOM, NCOM, RCOM* or *ALCOM*, *CONTROLS* refers to the control variables, including *BIG4*, *CAPX*, *CGCO*, *CLIST*, *GOWN*, *SGR*, *IND* and *YED*, and δ refers to the firm-level fixed-effects, consisting of a vector of 168 year dummies to represent the 169 sampled corporations.

Table 2 reports the findings of fixed-effects regressions of the presence of monitoring board committees on *Q*. First, to investigate whether the presence of the three monitoring board committees is connected to *Q*, we run *Q* on *ACOM, NCOM,* and *RCOM* with the control variables using equation (1) separately. Positive, but statistically insignificant impact of *ACOM* and *RCOM* on *Q* is noticeable in Models 1 and 3 of Table 2, and thereby providing support for the findings of past studies that report no link between the presence of monitoring board committees and market valuation (Klein, 1998; Vefeas and Theodorou, 1998; Laing and Weir, 1999). The coefficient on *NCOM* in

Model 2 of Table 2 is, however, narrowly statistically significant.[3] Second, and since the individual monitoring committees have largely statistically insignificant effect on *Q*, we re-regress equation (1) using firms that have set-up all three monitoring board committees (*ALCOM*) on *Q*. Positive and statistically significant effect on *ALCOM* on *Q* in Model 4 of Table 2 is discernible, and thereby providing support for *H1* and the recommendations of King II, as well as the findings of prior studies (Wild, 1994; Chhaochharia and Grinstein, 2009; Sun and Cahan, 2009) that suggest that the presence of monitoring board committees has a positive impact on market valuation.[4]

Insert Table 2 about here

Third, and given that a high proportion (over 90%, see Table 1) of our sample have *ACOM* and *RCOM* in particular, their insignificance may be due to the limited variability in the sample. Therefore, to ascertain whether our findings are driven by this phenomenon, we re-run our analysis by focusing only on corporations with independent audit committee (*IACOM*), independent nomination committee (*INCOM*), and independent remuneration committee (*IRCOM*). As the King Reports set stricter tests for independent non-executive directors than non-executive directors, such as not having professional, ownership, employment, family, supplier and customer connections (see King Committee, 2002), independent monitoring board committees can be expected to be more effective at monitoring and disciplining top management, and hence, a higher market valuation for corporations with independent monitoring board committees than those without. We test this proposition by re-regressing equation (1) by replacing *ACOM*,

[3]We also re-run equation (1) by including *ACOM*, *NCOM* and *RCOM* together, but the results remain the same with the *ACOM* and *RCOM* being statistically insignificant, whilst *NCOM* remains narrowly significant at the 10% level.
[4]We further re-run equation (1) by including *ACOM*, *NCOM* and *RCOM* together with *ALCOM*, but the results remain unchanged with the *ACOM, NCOM* and *RCOM* being statistically insignificant, whilst *ALCOM* remains significant at the 1% level.

NCOM, and *RCOM* with *IACOM*, *INCOM* and *IRCOM*, one at a time, respectively. Consistent with our prediction, positive and statistically significant effect of *IACOM*, *INCOM*, and *IRCOM* on *Q* is noticeable in Models 5 to 7 of Table 2, and thereby providing further support for *H1*, as well as the recommendations of the King Reports.[5] The evidence also implies that it is the independence of the committee rather than the mere existence that can have a significant positive impact on market valuation.

Theoretically, our findings are consistent with agency theory that suggests that corporate boards with independent monitoring committees have increased ability to effectively advise, monitor and discipline top management, and thereby enhancing market valuation (Lipton and Lorsch, 1992; Jensen, 1993). Our evidence also provides support for both the recommendations of the King Reports and the results of past studies (Wild, 1994; Chhaochharia and Grinstein, 2009; Sun and Cahan, 2009) that document a positive link between the presence of monitoring board committees and market valuation, but contradict those that either report a negative (Main and Johnston, 1993; Vefeas, 1999a) or no (Klein, 1998; Vefeas and Theodorou, 1998; Laing and Weir, 1999) connection with market valuation.

5.3 *Additional analyses*

We carry out two additional analyses to ascertain the robustness of our results. First, we examine the sensitivity of our findings to two alternative market valuation measures: return on assets (*ROA* – an accounting based measure) and total share returns (*TSR* – a market based proxy). The results based on using *ROA* and *TSR*, respectively, instead of *Q*, which for brevity are not reported here, but available upon request, suggest

[5]We get similar results if we re-run our regressions by including *IACOM, INCOM and IRCOM* at the same time.

a statistically significant and positive effect of *ALCOM* on *ROA* and *TSR* on *Q*, and thereby implying that our results are not sensitive to using an accounting (*ROA*) or a market (*TSR*) based proxy of firm valuation, instead of *Q*.

Second, and to control for potential endogeneity problems that may be caused by omitted variable bias, we use the widely used two-stage least squares (*2SLS*) methodology (Beiner et al., 2006; Henry, 2008; Ntim, 2011, 2012a, b). However, to make sure that the *2SLS* methodology is appropriate, and in line with Beiner et al. (2006), we first conduct Durbin-Wu-Hausman exogeneity test (see Beiner et al., 2006: 267) to test for the presence of an endogenous link between *Q* and *ALCOM*. Applied to equation (1), the test fails to accept the null hypothesis of no endogeneity, and thus, we conclude that the *2SLS* methodology may be appropriate and that our fixed-effects results may be misleading. In the first stage, we predict that the *ALCOM* will be determined by all the control variables contained in equation (1). In the second stage, we employ the predicted part of the *ALCOM* (*PRE_ALCOM*) as an instrument for *ALCOM* and re-run equation (1) on as follows:

$$Q_{it} = \alpha_0 + \hat{\beta}_1 ALCOM_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \delta_{it} + \varepsilon_{it} \qquad (2)$$

where everything remains the same as specified in equation (1) except that we use the predicted *ALCOM* (*PRE_ALCOM*) from the first-stage estimation as an instrument for the *ALCOM*. The coefficient on the *PRE_ALCOM* in Model 8 of Table 2 is positive and statistically significant, and thereby indicating that our evidence of a positive effect of *ALCOM* on *Q* is not sensitive to the presence of potential endogeneity problems that may be caused by omitted variables. Overall, the additional analyses indicate that our evidence is robust to different types of endogeneity problems and market valuation measures.

6. Summary and conclusion

This paper has investigated the association between the presence of monitoring board committees and market valuation using a sample of South African (SA) listed corporations. This coincides with a period during which the SA authorities pursued corporate governance policy reforms, which focused primarily on improving board accountability, independence and monitoring power in the shape of the 1994 and 2002 King Reports. We find a significant positive connection between the presence of monitoring board committees (i.e., the establishment of audit, nomination and remuneration committees) and market valuation, but only in corporations that have independent monitoring board committees and/or have all three monitoring board committees that we have examined simultaneously. This implies that the stock market values corporations with independent and/or the three board committees more highly.

Our findings are consistent across a number of econometric models that sufficiently address different types of endogeneities and market valuation proxies. Our results provide empirical support for agency theory, which indicates that the presence of independent monitoring board committees increases the capacity of corporate boards to effectively advise, monitor and discipline senior corporate executives, and thereby improving market valuation. Our evidence also has important regulatory and policy implications. The evidence that the market values only corporations with independent monitoring board committees implies that the SA authorities should focus more on encouraging firms to go beyond merely establishing the three monitoring board committees to having independent monitoring board committees, as recommended by the 2002 King Report.

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Table 1: Summary descriptive statistics of all variables for all 845 firm years

Variable	Mean	Median	Std. Dev.	Maximum	Minimum
Market valuation (dependent) variables					
Q	1.56	1.34	0.67	3.60	0.72
ROA	0.11	0.12	0.14	0.38	-0.19
TSR	0.28	0.25	0.89	2.36	-0.48
Monitoring board committees (independent) variables					
ACOM	0.91	1.00	0.38	1.00	0.00
NCOM	0.47	0.00	0.34	1.00	0.00
RCOM	0.91	1.00	0.37	1.00	0.00
ALCOM	0.45	0.00	0.32	1.00	0.00
Control variables					
BIG4	0.73	1.00	0.44	1.00	0.00
CAPX	0.13	0.08	0.15	0.66	0.07
CGCO	0.32	0.00	0.47	1.00	0.00
CLIST	0.22	0.00	0.41	1.00	0.00
LEV	0.32	0.19	0.31	0.78	0.01
GOWN	0.38	0.00	0.49	1.00	0.00
SGR	0.12	0.14	0.26	0.89	-0.44
LNTA	5.86	6.02	0.48	7.83	4.24

Notes: Variables are defined as follows: Tobin's Q (*Q*), defined as the ratio of total assets minus book value of equity plus market value of equity to total assets. Return on assets (*ROA*), measured as the ratio of operating profit to total assets. Total shareholder returns (*TSR*), calculated as annualised total shareholder returns made up of share price and dividends. The presence of an audit committee (*ACOM*), defined as a dummy variable that takes the value of 1 if a firm has established an audit committee, 0 otherwise. The presence of a nomination committee (*NCOM*), defined as a dummy variable that takes the value of 1 if a firm has established a nomination committee, 0 otherwise. The presence of a remuneration committee (*RCOM*), defined as a dummy variable that takes the value of 1 if a firm has established a remuneration committee, 0 otherwise. The presence of audit, nomination, and remuneration committees (*ALCOM*), defined as a dummy variable that takes the value of 1 if a firm has established audit, nomination and remuneration committees, 0 otherwise. Audit firm size (*BIG4*), measured as a dummy variable that takes the value of 1, if a firm is audited by a big four audit firm (PricewaterhouseCoopers, Deloitte & Touché, Ernst & Young, and KPMG), 0 otherwise. Capital expenditure (*CAPX*), calculated as the ratio of total capital expenditure to total assets. Cross-listing (*CLIST*), measured as a dummy variable that takes the value of 1, if a firm is cross-listed to a foreign stock market, 0 otherwise. The presence of a corporate governance committee (*CGCO*), defined as a dummy variable that takes the value of 1, if a firm has set up a corporate governance committee, 0 otherwise. Leverage (*LEV*), calculated as the ratio of total debts to market value of equity. Government ownership (*GOWN*), measured as a dummy variable that takes the value of 1, if government ownership is at least 5%, 0 otherwise. Sales growth (*SGR*), calculated as the current year's sales minus last year's sales to last year's sales. Firm size (*LNTA*), measured as the natural log of total assets.

Table 2: Estimating the effects of monitoring board committees on market valuation using fixed-effects regressions

Dependent variable	Q	Q	Q	Q	Q	Q	Q	2SLS (Q)
Adjusted R^2	0.285	0.318	0.280	0.360	0.297	0.356	0.325	0.375
F-value	6.654***	7.679***	6.630***	8.452***	7.358***	7.976***	7.765***	8.710***
(*N*)	(845)	(845)	(845)	(845)	(845)	(845)	(845)	(845)
Constant	1.320	1.514	1.310	1.735	1.340	1.658	1.534	1.980
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.450)	(0.000)***	(0.000)***
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ACOM/IACOM	0.003	-	-	-	0.042	-	-	-
	(0.865)	-	-	-	(0.050)**	-	-	-
NCOM/INCOM	-	0.026*	-	-	-	0.118	-	-
	-	(0.079)	-	-	-	(0.000)***	-	-
RCOM/IRCOM	-	-	0.002	-	-	-	0.065**	-
	-	-	(0.874)	-	-	-	(0.043)	-
ALCOM	-	-	-	0.126	-	-	-	-
	-	-	-	(0.000)***	-	-	-	-
PRE_ALCOM	-	-	-	-	-	-	-	0.146
	-	-	-	-	-	-	-	(0.000)***
Control variables								
BIG4	0.150	0.149	0.146	0.158	0.144	0.157	0.148	0.175
	(0.010)***	(0.000)***	(0.013)**	(0.000)***	(0.017)**	(0.000)***	(0.011)**	(0.000)***
CAPX	-0.015	-0.018	-0.010	-0.019	-0.006	-0.024	-0.020	-0.028
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.00)***	(0.000)***
CGCO	0.210	0.220	0.218	0.265	0.198	0.223	0.216	0.229
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CLIST	0.240	0.279	0.230	0.274	0.229	0.237	0.240	0.254
	(0.032)**	(0.000)****	(0.037)**	(0.000)***	(0.030)**	(0.034)**	(0.026)**	(0.000)***
LEV	-0.018	-0.110	-0013	-0.020	-0.018	-0.025	-0.026	-0.030
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
GOWN	0.120	0.123	0.114	0.122	0.110	0.160	0.154	0.172
	(0.000)***	(0.000)***	(0.013)**	(0.000)***	(0.026)**	(0.000)***	(0.000)***	(0.000)***
SGR	0.180	0.193	0.176	0.183	0.189	0.190	0.153	0.196
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.012)**	(0.000)***
LNTA	-0.226	-0.234	-0.219	-0.209	-0.210	-0.220	-0.229	-0.238
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
IND	Included	Included	Included	Included	Included	Included	Included	Included
YED	Included	Included	Included	Included	Included	Included	Included	Included

Notes: Coefficients are on top of parenthesis. ***, ** and * indicate that a *p*-value is significant at the 1%, 5% and 10% level, respectively. Following Petersen (2009), coefficients are estimated by using the robust clustered standard errors technique. Variables are defined as follows: Tobin's (*Q*), the presence of an audit committee/independent audit committee (*ACOM/IACOM*), the presence of a nomination committee/independent nomination committee (*NCOM/INCOM*), the presence of a remuneration committee/independent remuneration committee (*RCOM/IRCOM*), the presence of audit, nomination and remuneration committees (*ALCOM*), predicted *ALCOM* (*PRE_ALCOM*) – obtained by regressing *ALCOM* on the control variables and used as an instrument for the *ALCOM* in model 8, audit firm size (*BIG4*), capital expenditure (*CAPX*), the presence of a corporate governance committee (*CGCO*), cross-listing (*CLIST*), leverage (*LEV*), government ownership (*GOWN*), firm size (*LNTA*), industry dummies (*IND*), and year dummies (*YED*). Table 1 fully defines all the variables used.