Empirical Evidence on the Link Between Compliance with Governance of Best Practice and Firms' Operating Results

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Abstract

This study provides robust evidence in support of the agency theory argument that corporate governance matters for a firm's operating performance. Using the corporate governance ratings as the governance proxy from *Horwath 2006 Corporate Governance Report (mid-sized Australian ASX companies)* and *Mid-Cap Corporate Governance Report 2007* (The University of Newcastle 2006; 2007), I examine 60 sample firms to reveal that a firm's governance is positively and significantly related to firm performance as measured by return on equity, earning yield and return on assets. This study extends the findings of these two reports which found a disturbing trend in the corporate governance practice of Australian mid-cap companies – both a decrease in companies with excellent corporate governance, and an increase in companies with significant corporate governance deficiencies. The findings of this study suggest that those mid-size companies who have allowed corporate governance to deteriorate have adversely affected their shareholder returns.

Keywords: Corporate governance, Agency theory, Mid-cap, Best practice, Horwath report

JEL Classification: G34, G38, K22

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Introduction

The corporate governance of Australia's mid-cap companies attracted attention after the *Horwath 2006 Corporate Governance Report (mid-sized Australian ASX companies)* and the *Mid-Cap*[2] *Corporate Governance Report 2007* revealed that the corporate governance standards of mid-cap companies were deteriorating (The University of Newcastle 2006; 2007). In fact, the reports found a disturbing trend – both a decrease in companies with excellent corporate governance, and an increase in companies with significant corporate governance deficiencies[3]. The findings are as much of a concern for investors as they are for regulators, in particular for the Australian Stock Exchange (ASX), as this raises a serious question about the efficacy of its disclosure and market-based corporate governance guidelines.

The ASX released its *Principles of* Good *Corporate Governance and Best Practice Recommendations* (ASX guidelines) in March 2003 (ASX 2003) following a number of corporate disasters both in Australia (e.g. HIH Insurance) and in offshore jurisdictions (e.g. Enron in the U.S.). The key objective of the guidelines was to address concerns about unacceptable corporate governance behaviour and restore investor confidence (Gold 2006).

However, some commentators have perceived the poor and deteriorating corporate governance practices by Australia's mid-cap companies two years after these guidelines came into effect to be a matter for concern. For example, Newcastle University Associate Professor Jim Psaros, the co-author of both reports, described the results as a concern while BDO Kendalls director of risk advisory services Andrew Pearce, as cited by Gettler (2007, p.10), said "the increase in companies with serious corporate governance holes was a worry". The findings may undermine the efficacy of the ASX's disclosure and market-based governance regime and could even ignite a debate for a more prescriptive measure similar to the *Sarbanes Oxley Act 2002* introduced in the U.S. in 2002 (*Sarbanes Oxley Act 2002*).

This study investigates the potential impact of the deteriorating state of corporate governance practices among Australian mid-cap companies on their operating effectiveness. The results suggest that shareholders of companies with a good corporate governance system in place, as measured by the level of compliance with the governance of best practice (e.g. ASX guidelines), enjoy better economic returns, compared to shareholders of companies that have relatively inferior sets of governance mechanisms.

Research Motivation

This study is motivated by two factors. The first is the lack of research on the effect of corporate governance on organisational performance outside the large-cap companies in Australia. For example, virtually all of the literature in the Australian context investigates large-cap companies (Lawrence & Stapledon 1999; Keil & Nicholson 2003; Pham, Suchard & Zein 2007). That effectively means that little is known about the status of the corporate governance practices of Australian mid-cap listed companies and whether these practices have any bearing on their economic performance. The resource constraints and the degree of variation in regulatory requirements means the results observed in the large-cap companies cannot be meaningfully

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[2] The term 'mid-cap' in these reports refers to the companies ranked 251 – 400 by market capitalisation at the time of research, whereas the term 'ASX mid-caps' refers to the S&P/ASX index comprised of all of the members of S&P/ASX 100 excluding those in the S&P/ASX 50 index.

[3] See figures 1 and 2 in Appendix.

generalised to their small-cap counterparts. Furthermore, a deteriorating trend in the governance practices of mid-cap listed companies as shown by their reports means that the constituency of mid-cap companies provides a fitting context to examine the governance-performance relation.

In addition, virtually all studies that examined the governance-performance relation seem to use level data. In other words, these studies attempted to establish causality between governance and performance using a firm's basic data of a given year or years. It can be argued that studying causality is more appropriately achieved by using differential data (i.e. a change in a variable from one period to another) as it is more likely to capture the effect of changes in a predictor variable on the dependent variable/s. Therefore, this study uses the differential data approach in order to capture the changes on the dependent variable as a result of the actual changes in the independent variables.

Underlying Argument for the Governance-Performance Relationship

The relationship between management and shareholders, in terms of agency theory, is based on the separation of ownership and control, and the key assumption that is associated with this is the presumption of fundamental tension between the shareholders and corporate managers (Jensen & Meckling 1976). Furthermore, the managers' superior access to inside information and the relatively powerless position of numerous and diffuse shareholders means that a reasonable prospect exists for managers to benefit personally at the expenses of shareholders.

The 'model of man' underlying the agency theory and organisational economics is that of the self-interested actor rationally maximising his own personal economic gain (Donaldson & Davis 1991). In that sense, managers' decisions could be influenced by their personal preferences that are likely to be inconsistent with organisational goals. Given the unique position that managers occupy, they can benefit substantially without actually bearing the costs. As a result, managers have not only the ability but also the incentive to engage in activities that enhance their personal benefit at the expense of shareholders' residual claims.

Therefore, the rationale for corporate governance stems from a concern to protect shareholders from managerial opportunism arising from goal divergence and the information asymmetry that is inherent in the agency relationship characterising modern corporations. The term 'corporate governance' generally refers to a protective mechanism stemming from agency theory. It is generally understood as a multi-dimensional construct consisting of many systems and processes covering a wide range of components. More specifically, it is the process of supervision and control that ensures that the company's management acts in the interest of shareholders (Parkinson 1994).

Corporate governance codes recommend a range of structural attributes of good corporate governance. These structural attributes are primarily centred on the board of directors. The principal duty of the board of directors is to monitor management's decision-making on behalf of shareholders. The board is more likely to be an effective monitor if it is not associated with executive management, the Chief Executive Officer (CEO) in particular. Boards with a majority of independent directors and a separate Board Chair and CEO are viewed as a necessary governance structure and have been extensively debated and analysed in the academic literature (Cadbury 1992; ASX 2003). According to Fama and Jensen (1983), an independent and engaged board of directors ensures that managers behave in the best interest of shareholders as it counterbalances the power of the management in decision-making. The key role of the board is to ensure that the CEO carries out their duties in a way that serves the best interest of shareholders. Conversely, the board's role can be seriously compromised if the CEO assumes the roles of both CEO and Board Chair. Edwards and Clough (2005) argue that an independent chair enhances the board's capacity to keep the

CEO's activities in check. In addition, the board should also be of an appropriate size so as to encourage efficient decision-making (ASX 2003).

There are two aspects of corporate governance — conformance and performance (Edwards & Clough 2005). The conformance aspect entails the board's responsibility to ensure compliance with relevant governance regulations and the timely discharging of various contractual obligations. The objectives of governance regulations are to provide frameworks for governance systems that reduce managers' improper and unlawful behaviour through enhanced transparency and a greater level of managerial accountability. On the other hand, the performance aspect of corporate governance involves monitoring the performance of the organisation, although monitoring is only one of the board's roles. It also has a strategic role involving setting organisational goals, developing strategic plans for achieving these goals, and being responsive to changing environmental demand. This responsiveness includes the prediction and management of risk. In addition to involvement in strategic planning, boards also contribute to a firm's success by advising management, channelling outside resources to the firm and relating to stakeholders such as communities and employees (Young 2003).

However, the question of whether governance is associated with organisational performance is an empirical one. A significant body of literature has attempted to provide empirical justification for this agency theory argument. The branches of the literature relevant to the current study are reviewed in the next section.

Governance and Organisational Performance: The Empirical Evidence

Early studies on governance and organisational performance, particularly prior to the start of this century, sought to establish the link between various individual governance elements and financial performance measured by various performance indicators with particular focus on the Anglo-Saxon economies[4], especially the U.S. Although there are almost an infinite number of governance elements, the most examined issues in the governance-performance literature appear to be board independence, separation of the roles of CEO and Chair and board size.

Studies by Hermalin and Weisbach (1991), Klein (1998) and Bhagat and Black (2002) did not find any robust relationship between board independence and firm performance. Lawrence and Stapledon (1999) investigated the Top-100 Australian listed firms in 1995 and found no consistent association between independent directors and firm value. Westphal (2002, p.2) concluded "after nearly two decades of academic research in multiple disciplines (finance, accounting and management) on the consequence of board composition, there is little evidence that board independence enhances the board effectiveness".

Another board structure measure that is highly recommended by the codes of best practice is the separation of the roles of CEO and Chair. However, past studies did not find robust evidence to suggest that having such a measure enhances firm performance (Baliga, Moyer & Rao 1996; Brickly, Coles & Jarrell 1997; Dalton et al. 1998; Kiel & Nicholson 2003).

The general consensus in terms of board size appears to be that a smaller board is desirable (ASX 2003). In theory however, both larger and smaller boards can be justified. For example, larger boards have a better ability to establish external links with the environment, secure more critical resources and bring more highly-qualified directors with an abundance of knowledge and experience vital for the firm's overall strategy formulation (Pfeffer & Salancik 1978; Dalton et al.

[4] The Anglo-Saxon economy refers to the economy practised in major English-speaking countries such as the United Kingdom, Republic of Ireland, United States, Canada, Australia and New Zealand.

1999). On the other hand, larger boards limit their directors' ability to satisfy its main functions, making coordination, communication and decision-making processes more cumbersome than they are for smaller boards.

The literature has found no conclusive evidence of a link between board size and performance. For example, Yarmack (1996) found that smaller boards are related to a higher firm value, while Kiel and Nicholson (2003) found a positive association between board size and market-based performance (i.e. Tobin's Q). However, Holthausen and Larcker (1993) and Dalton et al. (1999) found no association between board size and firm performance suggesting that board size on its own does not explain the firm performance.

The literature also provides mixed evidence in relation to the association between non-board-related governance variables and firm performance. Managerial ownership and CEO remuneration are two non-board-related variables often examined in the literature. Empirical evidence on their potential impact on firm performance appears similar to those of board-structured governance variables and organisational performance — that is, inconclusive. The literature provides evidence that the relationship between managerial ownership and firm performance is non-linear (Morck, Shleifer & Vishny 1988; Welch 2003; Li et al. 2007). With respect to the link between CEO remuneration and firm performance, most of these studies concluded that these variables are not related.

One possible argument for this lack of relationship is that a firm's corporate governance is a composite function of many governance factors. Therefore, assessing the extent of the firm's corporate governance requires taking into account all of the variables that make up the firm's overall corporate governance system.

Since the start of this century, researchers have started using a number of governance attributes in combination (e.g. broad-based index) to proxy the firm's governance (Love 2012). Theoretically, the broad-based index approach can be considered superior as it better represents the firm's overall corporate governance. Love (2012) argues that the aggregate approach of measuring governance is useful as it focuses on the concept of corporate governance and abstracts from individual governance components that are so numerous that they make such research difficult. This means that a broad-based index, which reflects the firm's overall corporate governance quality, is able to serve as a better proxy for the quality of corporate governance.

Black (2001) is one of the earliest studies to examine the governance-performance relationship using an index as a governance proxy. His examination of 21 Russian firms revealed a strong correlation between the firm's corporate governance ranking (index)[5] and firm value. However, he described the result as only tentative, given the small sample size.

Gompers, Ishii and Metrick (2003) investigated 1,500 large U.S. firms from 1990 through 1998 and reported on compelling evidence of association between governance and performance. In particular, they demonstrated that an investment strategy that bought firms in the lowest deciles (i.e. good governance) and sold in the highest deciles (i.e. poor governance) on the index would have earned an abnormal return of 8.5% per year during the sample period. Although the findings caused a sensation in academic circles at the time, subsequent analysis questioned their robustness. For example, Yen (2005) found that a reported abnormally high return for well-governed firms in Gompers, Ishii and Metrick (2003) was driven by outliers and by the inclusion of penny stocks. Ferreira and Laux (2007) provided evidence that the higher risk inherent in well-governed firms provides a better explanation for the abnormal return observed by Gompers, Ishii and Metrick.

[5] The author used the ranking system developed by the Brunswick Warburg investment bank that rated Russian firms on a 0 to 60 scale, with higher numbers indicating poorer governance.

James and Cotter (2007) noted that Australian annual report disclosures about corporate governance practices are not useful to assess default risk. In a complete contrast to general belief, Gold (2006) reported that the portfolio of poorly governed firms significantly outperformed the broad equity market throughout the study period. Furthermore, the poorly governed firms also exhibited operational and financial efficiency superior to the market (Gold 2006). Hiroyuki and Pascal (2007) report similar results in the Japanese context. They found that well-governed Japanese firms performed poorly compared to their poorly governed counterparts between 2000 and 2005.

The review of literature seems to suggest that the quality of a firm's corporate governance, as defined by governance regulations and codes, has little bearing (if any) on its performance in Australia, and for that matter, around the world. This certainly appears to be the case especially in large-cap companies. What is not clear from the literature review, however, is the relationship between governance and performance outside the large-cap companies, particularly Australian mid-cap companies (i.e. the 250 – 400 largest listed companies). Furthermore, as stated in the motivation section, all of the studies reviewed have used level data, which is probably not the most appropriate approach to measure the effect of the changes in one variable/s on the other.

Research Methodology

Data, Sample and Corporate Governance Proxy

The initial sample for this study contained the 150 mid-cap Australian companies included in the *Mid-Cap Corporate Governance Report 2007* (The University of Newcastle 2007). The report states that the research contents were derived from the 2006 Annual Reports disclosures of 150 'mid-sized' Australian listed companies (i.e. the 251 – 400 largest based on market capitalisation as at 31 December 2006). This report follows the *Horwath 2006 Corporate Governance Report (mid-sized Australian ASX companies)* (The University of Newcastle 2006) which also examines the corporate governance practices of 'mid-cap' Australian listed companies.

Samples for this study were selected using three basic selection criteria. The first was that firms must have corporate governance ratings available for both the 2005 and 2006 financial years. Essentially this means that the firm must be included in the both *Horwath 2006 Corporate Governance Report (mid-sized Australian ASX listed companies)* and the *Mid-Cap Corporate Governance Report 2007*. Because of changes in market capitalisation (the basis for determining 'mid-cap' companies), 88 companies were dropped from the mid-cap constituent in the *Mid-Cap Corporate Governance Report 2007*. This means that only 62 companies have corporate governance ratings available for both years.

The second criterion related to the availability of necessary financial data. Data for all 62 companies were hand-collected using the Aspect Huntley Annual Reports and Aspect Huntley FinAnalysis databases. The third and final criterion was that data did not demonstrate unusual attributes[6] (i.e. they must not be outliers). Two companies – the Life Therapeutics and ST Energy – were identified as outliers and therefore removed from the sample, leaving a net sample of 60 companies. The two companies respectively reported a Return on Assets (ROE) of 8,129.73% and a Return on Invested Capital (ROIC) of -3,224.87%.

[6] An outlier in this study was defined as a Z-score with an absolute value greater than 4.

Corporate Governance Proxy – BDO Kendalls Star Ratings

This study uses the *Horwath 2006 Corporate Governance Report (mid-sized Australian ASX companies)* and *Mid-Cap Corporate Governance Report 2007* star ratings to proxy the sample firms' corporate governance quality. The star ratings in these reports were prepared using the model that carefully considered objective factors based on publicly-disclosed information pertaining to: the existence and structure of a company's Board of Directors; the level of perceived independence of external auditors from the company; and disclosures relating to the existence of a code of conduct, risk management and share trading policy (The University of Newcastle 2006; 2007). This meant that the governance rating not only captured the structural aspect but also the behavioural and disclosure aspects of a firm's corporate governance. Furthermore, the reports state that the corporate governance assessment model developed in the research is based upon a combination of factors identified in national (e.g. ASX guidelines) and international (e.g. OECD reports) best practice guidelines and research studies. In that sense, it is fair to assume that the ratings represent the firm's overall corporate governance practice and therefore serve as a good, and to an extent, reliable proxy.

The reports have assigned each company stars (*) ranging from 1 to 5. Five stars denotes the highest level of corporate governance while one star denotes the lowest. Table 1 summarily describes the star ratings.

Table 1
Star Ratings Explanations

* Ratings	Descriptions
***** (5)	Corporate governance structures were outstanding. The structures met all best practice standards and could not be faulted.
***** (4.5)	Corporate governance structures were excellent and met all best practice standards other than in relatively minor circumstances.
**** (4)	Corporate governance structures were very good and met the vast majority of best practice standards.
**** (3.5)	Corporate governance structures were generally good and met most of the best practice standards.
*** (3)	Corporate governance structures were adequate and met some of the best practice standards.
** (2)	Corporate governance structures were lacking in some key areas.
* (1)	Corporate governance structures were lacking in most key areas.

Note: *The star ratings summary is directly quoted from the Horwath 2006 Corporate Governance Report (mid-sized Australian ASX companies). Please refer to the reports for the detailed description of each star rating.*

Corporate Governance Trends of Australian Mid-caps

This section analyses the change in quality of corporate governance practices (in terms of star ratings) of the sample companies over the two-year period. Table 2 shows their corporate governance trends.

Table 2
Trends in Corporate Governance Ratings (2005 and 2006)

Trend	Sample size	% of the Total
Increasing	19	32
Constant	27	45
Decreasing	14	23
Total	60	100

While 19 (32%) companies have improved their corporate governance system by better complying with codes of best practice, 14 (23%) companies have actually taken a backward step. However, the majority of companies, 27 (45%) have kept their corporate governance structure unchanged during the sample period. Table 3 presents the scale of changes made by the remaining 33 sample companies in their corporate governance structure over the two-year period.

Table 3
The Scale of Changes in Corporate Governance for Different Firms

Changes: increase/decrease	Frequency	Cum. frequency	% of the Total	Cum.% of the Total
Increase by 0.5 star	6	6	18	18
Decrease by 0.5 star	5	11	15	33
Increase by 1 star	6	17	18	51
Decrease by 1 star	6	23	18	69
Increase by 1.5 stars	5	28	15	84
Decrease by 1.5 stars	2	30	6	90
Increase by 2 stars	1	31	3	93
Decrease by 2 stars	1	32	3	93
Increase by 2.5 stars	1	33	3	99

As can be seen from Table 2, most of the changes (increase/decrease) in the sample firms' governance ratings occurred in the small scale. For example, 23 (69%) of 33 companies changed their governance star ratings by 1 star rating or less (e.g. 0.5 star). Two possible explanations can be suggested for this trend. First, the change occurs gradually. Second, firms may deliberately avoid drastic changes for the fear of a negative market reaction even if such a drastic change is operationally desirable.

Corporate Governance and Performance: Descriptive Analysis

In order to examine the effect of corporate governance on a firm's operating outcomes, this study first analyses the relationship between a firm's corporate governance structure and their operating performance as measured by various performance indicators. The basic assumption underpinning agency theory is that the firm's corporate governance matters for its operating performance. That essentially means that there is a positive relationship between governance and operating performance – good governance structure means a higher operating performance and vice versa. This study employs three different performance indicators to proxy firm performance. The purpose of using different performance measures is to examine if the impact of governance is more pronounced on certain performance measures as reported by some previous studies (Padget & Shabbir 2005; Love 2012).

- *Return on Equity (ROE)* – Return on equity is a measure of profit earned in relation to equity resources invested. It is a key indicator of how well managers are employing shareholders' funds to generate returns. It is calculated by dividing net profits before abnormals by shareholders' equity.
- *Earnings Yield (EY)* – Earnings yield is the market return on stocks. This study uses the so-called 'magic formula' developed by Greenblatt (2005), which divides *EBIT* (i.e. earning before interest and taxes) by the enterprise's value (i.e. market capitalisation + debt – excess cash) to calculate the earning yield.
- *Return on Assets (ROA)* – Return on assets shows how much profit a company is making on the assets used in the business. Therefore it is a key measure of a company's profitability. It is calculated as follows: [Net Income + Interest Expenses (1 – Corporate tax rate)/(Total Assets – Outside Equity Interest)].

The means of corporate governance ranking (i.e. *Gov(Rnk)*) and various performance variables for 2005 and 2006 along with percentage changes for the sample companies under three different corporate governance situations are presented in Table 4.

Table 4
Mean Changes of Firms with Various Corporate Governance Situations

Trends	**Decreasing**			**Stable**			**Increasing**		
Variables	**2005**	**2006**	**Change**	**2005**	**2006**	**Change**	**2005**	**2006**	**Change**
Gov(Rnk)	3.71	2.75	-0.96	3.24	3.24	0.00	2.39	3.50	1.11
ROE	0.08	-0.03	-0.11	0.11	0.12	0.01	0.08	0.11	0.03
EY	0.07	0.01	-0.06	0.05	0.07	0.02	0.04	0.08	0.04
ROA	0.05	0.03	-0.02	0.04	0.07	0.03	0.04	0.06	0.02
Observations		14			27			19	

It is apparent from Table 4 that the means of various performance indicators are moving together with the mean of corporate governance rankings (i.e. *Gov(Rnk)*). For example, decreases in the mean *Gov(Rnk)* are associated with decreases in the means of all performance indicators and vice versa. While this does not necessarily indicate the causality between the quality of firm's governance and associated performance, it does provide valid justification for further analysis.

This study uses the Pearson correlation to test the association between firms' corporate governance structure and various measures of firm performance statistically. Table 5 shows the results.

Table 5
Pearson Correlation Matrix

Variables	**ΔGov(Rnk)**	**ΔROE**	**ΔEY**	**ΔROA**	**ΔFirm size**	**ΔLeverage**	**ΔGrowth**
ΔROE	0.24*						
ΔEY	0.21	0.47***					
ΔROA	0.14	0.51***	0.70***				
ΔFirm size	-0.31**	0.29**	0.23*	0.38***			
ΔLeverage	-0.30**	-0.13	-0.02	-0.03	0.07		
ΔGrowth	0.01	-0.32**	0.27**	0.12	-0.23*	0.03	
ΔProfitability	0.12	-0.05	-0.04	0.03	-0.17	0.12	0.14

***,** ** and *** denote significance levels at 0.01, 0.05 and 0.10 respectively (two-tailed test).*

As can be seen from Table 5, changes in the firm's corporate governance are positively correlated with all three measures of firm performance. The correlation between the change in *ROE* and change in *Gov(Rnk)* is statistically significant at the 10% level. Although the correlation between change in *Gov(Rnk)* and other two performance measures (*EY* and *ROA*) are insignificant, they appear materially to be important given the size of the correlation values of 0.21 and 0.14 respectively.

As expected, all dependent variables (i.e. *ROE*, *EY* and *ROA*) are positively and significantly correlated to each other. However, in exception to the correlation between size and growth, which is significant at the 10% level, there is no significant correlation between the predictor variables.

Corporate Governance and Performance: Empirical Analysis

This section investigates the link between the firm's corporate governance practices and the measures of firm performance. Prior evidence in Australia does not conclusively support the assumed relationship.

Some earlier studies have used either individual governance elements (e.g. board independence) or a broad-based index to proxy the firms' corporate governance. However, both methods involve examining the relationship between the firm's levels of compliance, individually or in aggregate, and various performance measures using the level data.

This study uses a different approach to examine the governance and performance relationship: the changes in the firm's governance practices and changes in its performance. This approach can be argued to be theoretically sound as it is expected to better capture the effect of changes in the independent variable (i.e. *Gov(Rnk)*) on the changes on the dependent variables (i.e. *ROE*, *EY* and *ROA*). The relationship will be tested using the following multiple ordinary least square regression model:

$$\Delta Performance = \alpha + \beta_1 \Delta Gov(Rnk) + \beta_2 \Delta FirmSize + \beta_3 \Delta Leverage + \beta_4 \Delta Growth + \beta_5 \Delta \Pr ofitablity + \varepsilon$$

The term 'performance' in the model collectively denotes three performance measures: *ROE*; *EY*; and *ROA*. These variables represent the changes in the performance measures of sample firms between 2005 and 2006. The independent variable, the change in *Gov(Rnk)*, represents the actual change in the sample firms' corporate governance structure over the two-year period as measured by the star ratings. α in the model is the intercept tem. β represents the coefficients pertinent to the independent variable and control variables. □ is the error term which is assumed to be normally distributed.

The purpose of including the control variable in the regression model is to reduce, if not eliminate, the possibility that the observed relationships are not spurious. These variables are defined and approximated as follows:

- *Firm Size* – The firm's total assets measured in dollar value. It is argued that bigger companies generally have a greater level of access to the resources needed to develop and maintain a higher level of corporate governance structure. Furthermore, additional compliance requirements fall disproportionately on smaller companies that can significantly affect their compliance as well as their performance level. The firm size is used to capture this effect. The variable is transformed using a logarithm to reduce skewness and outliers and increase normality.
- *Leverage* – It is widely accepted that credit providers more closely monitor firms with a higher leverage. Furthermore, the need to service their debt obligations (interest and compliance with debt covenants) places managers of highly-levered firms under a greater pressure to perform than is the case for their lowly-levered counterparts. Leverage, which is defined in this study as the ratio of non-current liabilities to total assets, is used to capture the effect.
- *Growth Prospect* – Logically, the firm's growth prospect may affect its performance or governance decisions. For example, the higher profit observed in growth firms may be driven by their growth rather than by any improvement in corporate governance. It is also possible that growing firms may decide to have better governance systems to attract the capital needed to fund their growth. The logarithm of market-to-book ratio is used to proxy the growth dimension.

- *Profitability* – The firm's current profitability is also expected to affect its current performance. This variable is approximated by dividing *NOPLAT* (i.e. Net Operating Profit Less Adjusted Taxes) by operating revenue. It represents a key measure of the profitability of sales from an operating perspective while eliminating the effects of capital structure.

The assumption underpinning this research model is that changes in the firm's governance practices are likely to affect various operating decisions and therefore ultimately its performance. Therefore, we expect to better capture this relationship if it is examined using the differential rather than the level data.

Results

Table 6 presents the results of the regression analysis. Adjusted R^2 values ranges from 18 to 21 under different performance measures indicating that at least 18% of observed variation in the performance was explained by the independent variables. Statistically significant ($p<0.01$) F-tests indicate that the model is robust.

Table 6
Regression Results

		Δ ROE		Δ EY		Δ ROA	
Variables	**Exp. ±**	**Coefficient**	**VIF**	**Coefficient**	**VIF**	**Coefficient**	**VIF**
Intercept		-0.07**		-0.04*		-0.03*	
ΔGov(Rnk)	+	0.07**	1.23	0.06***	1.23	0.03**	1.22
ΔFirm size	+	0.48**	1.19	0.40***	1.19	0.35***	1.19
ΔLeverage	+	-0.09	1.13	0.07	1.13	0.01	1.10
ΔGrowth	+	-0.22**	1.07	0.23***	1.07	0.10**	0.07
ΔProfitability	+	0.00	1.08	-0.02	1.08	0.01	1.02
Sample size		60		60		60	
F-Statistics		3.64***		4.05***		3.93***	
Adjusted R^2		0.18		0.21		0.20	

, ** and * denote significance levels at 0.01, 0.05 and 0.10 respectively (two-tailed test)*

It is apparent from Table 6 that the difference in *Gov(Rnk)* is positively associated with the differences in all three performance measures. The relationships are robust as indicated by statistically significant coefficients ($p<0.05$), and in case of *EY*, the relationship is significant at 1% level. These results provide a robust support for the agency theory argument that governance matters for performance. The fact that *Gov(Rnk)* is robustly associated across different performances measures suggests that the impact of the corporate governance is not performance-measure-specific as reported by earlier studies (Padget & Shabbir 2005; Love 2012).

With respect to control variables in the regression results presented in Table 6, the results are broadly as expected. *Firm size* as measured by total assets is significantly positively associated with all of the performance proxies. This result is consistent with the evidence reported by a number of previous studies (Baumol 1959; Majumdar 1997).

Leverage is positively associated with *EY* and *ROA*. This is consistent with the argument that managers of highly-levered firms face greater levels of accountability and need to increase operating efficiency in order to be able to timely discharge the debt obligation. However, the relationship is not robust as indicated by the statistically insignificant coefficients ($p>0.10$). Although leverage is negatively related to *ROE*, the finding is not unusual. A number of prior studies have provided evidence of negative relationships between leverage and performance

(Agrawal & Knoeber 1996; Weir, Laing & McKnight 2002). Again, a statistically insignificant coefficient (p>0.10) means the relationship is not considered robust.

The coefficient of *Growth* is expected to be positive because firms with greater growth prospects are expected to perform better. This is certainly the case in respect of *ROA (p<0.10)* and *EY (p<0.01)* as demonstrated by significantly positive coefficients. However, the negative and statistically significant coefficient of *ROE (p<=0.05)* seems a little puzzling and logically unexplainable. While the relationship between profitability and performance measures is as anticipated except in the case of *EY*, it is not statistically significant (p>0.10). The highest variation inflation factor (*VIF*) is 1.23 which is not significantly greater than 1 for the regression model to be biased (Bowerman, O'Connell & Dickey 1986). Furthermore, the average tolerance[7] is not below 0.20. This suggests that multicollinearity is not the issue in the dataset.

Conclusion, Contribution, Limitations and Future Research

Corporate governance guidelines (codes) have become much more important in corporate decision-making since the issuance of the U.K. *Cadbury Report* in 1992 (Cadbury 1992) and particularly since the early 2000s. This has also resulted in the considerable expansion in the literature on corporate governance, particularly on codes of good governance. The major impetus for this drive appears to be countries' desires to make their corporate governance practice more effective, in part as a consequence of corporate governance scandals but also to attract investors (Aguilera & Cuervo-Cazurra 2009). In particular, it is argued that good governance is linked to a firm's superior performance. This study provides robust evidence in support of this theoretical argument.

However, the results of this study are subject to some limitations. One key issue that affects the validity of the research of this nature is the direction of causality. This study therefore does not rule out the possibility that the observed relationships may have been a result of profitable companies having good corporate governance systems rather than the other way round. The relatively small sample size is another cause of concern in respect of the findings of this study.

The study contributes to the current corporate governance literature by providing evidence of a robust relationship between governance and performance using differential data instead of level data. Furthermore, this study reduces the apparent knowledge void with respect to corporate governance practices and associated economic consequences outside the large caps band by focussing on mid-cap listed companies. The findings of this study reinforce the importance of having good corporate governance by providing empirical evidence that a firm can benefit economically by having a high standard of corporate governance. It is expected that these findings will provide a valuable reference point for existing policy assessment and/or future policy direction.

One possible extension of this research in the future is to extend the study period from the two-year period used. This approach would enable the researcher to examine the consistency of the relationship over a longer period. Another, possibly more important extension, is to adopt an alternative method that is consistent with the spirit of the principle of the comply-or-explain approach to governance in measuring the firm's corporate governance practice. The generally accepted view is that corporate governance is not a one-size-fits-all concept. Even with companies within a defined category, it is possible that they differ considerably in terms of capital base, risk profile, corporate history, business activity and management and personnel arrangements (Brown &

[7] The average tolerance, which was not reported in Table 6, is 0.88 which is significantly greater than 0.20; the cut-off point for an indication of the presence of multicollinearity as suggested by Bowerman and O'Collonell (1990).

Gorgens 2009). This means no particular governance structure is likely to exist that equally suits all types of corporations.

The 'if not, why not' clause which underpins the ASX guidelines clearly acknowledged this very fact by allowing legitimate departure so long as any such departure is clearly and adequately justified to the potential users of the information – capital markets. Essentially this means it is not the degree of compliance alone but the extent of information offered to justify non-compliance that should form the basis for assessing the firm's overall corporate governance practice. An assessment of a firm's corporate governance system based on compliance rates alone is unlikely to represent the true extent of its corporate governance systems. Therefore, both rates of compliance and the explanations offered for non-compliance must be considered when assessing the firm's corporate governance quality.

The underlying objective of corporate governance is to reduce information asymmetry and enhance managerial accountability. This can only be achieved if the company provides as much information about its corporate governance practices as deemed necessary for the market to make sound economic decisions. The underlying assumption here is that well-governed firms provide detailed information about their corporate governance practice to the market, not just basic conformity to the guidelines.

Therefore, the methodological approach that involves critically analysing both of the pillars of the comply-or-explain model in assessing the firm's corporate governance measure is likely to eliminate some of the problems associated with the traditional method that uses the simple dichotomy of compliance and non-compliance within best practice. It is expected that governance ratings developed using such an approach are likely to capture the true extent of a firm's intentions and behaviour relating to its corporate governance commitment and therefore are likely to provide a better corporate governance proxy. After all, as Heracleous (2008) argued, governance structure is possibly a necessary condition but certainly not a sufficient condition for good performance, and therefore a precise assessment of a governance system requires consideration of other elements that affect the behaviour of decision-makers.

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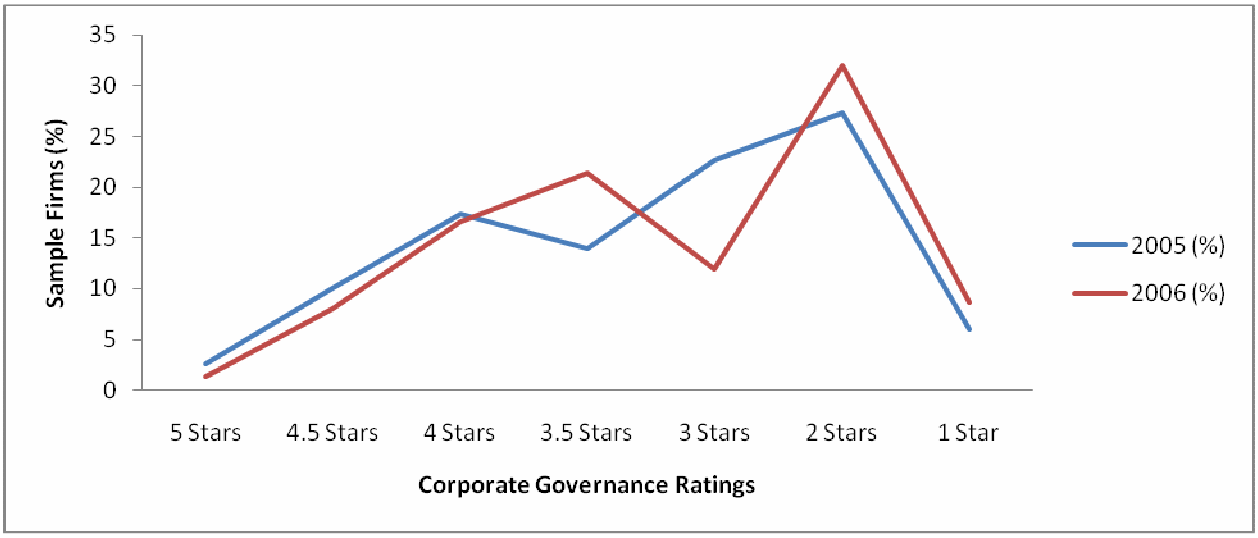
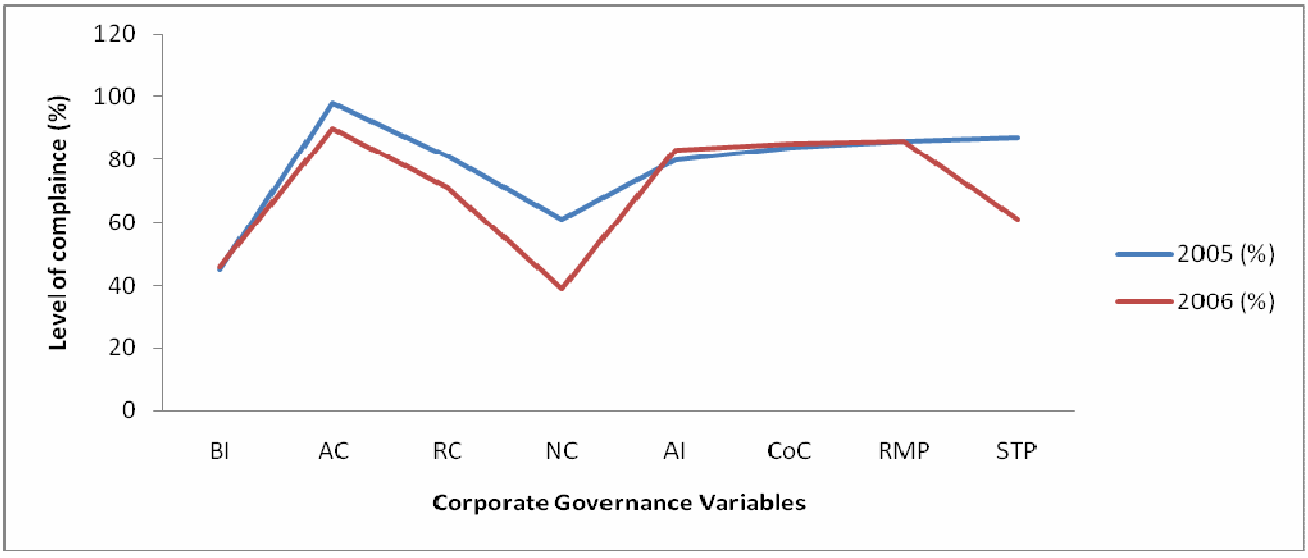
Appendix

Figure 1
Comparative Display of Governance Ratings between the 2005 and 2006 Financial Years



Note: *The decrease in the number of companies with 4-5 stars and the increase in the number of companies with 1-2 stars in 2006 suggests that the corporate governance practices of mid-size companies have markedly deteriorated in 2006 relative to the 2005 reporting period.*

Figure 2
Comparative Level of Compliance of Various Corporate Governance Elements between the 2005 and 2006 Financial Years



Note: *The terms displayed horizontally in the graphs stand for the following: BI 'board independence'; AC ' audit committee'; RC 'nomination committee'; NC ' nomination committee'; AI 'auditor independence'; CoC 'code of conduct'; RMP 'risk management policy' and STP 'share trading policy'. Except for board independence, auditor independence, code of conduct and risk management policy, the compliance level of all of the other governance elements has markedly deteriorated in 2006 compared to the 2005 reporting period.*