

**Governance quality of Australian industries: the impact of political costs, competition intensity  
and reforms**

Maria Strydom<sup>(\*)</sup>

Farshid Navissi

Michael Skully

Madhu Veeraraghavan

Department of Accounting and Finance

Faculty of Business and Economics

Monash University, Melbourne, Australia

<sup>(\*)</sup> Corresponding author\*

Department of Accounting and Finance

900 Dandenong Rd,

Caulfield East 3145,

VIC, Australia

Phone: 61 3 99034581

Fax: 61 3 99032422

Email: [Maria.Strydom@BusEco.monash.edu.au](mailto:Maria.Strydom@BusEco.monash.edu.au)

# **Governance quality of Australian industries: the impact of political costs, competition intensity and reforms**

*Maria Strydom, Farshid Navissi, Michael Skully, Madhu Veeraraghavan*

*Department of Accounting and Finance, Monash University*

## **Abstract**

This study investigates differences in governance quality across Australian industries. We postulate certain industries maybe better governed than others due to their own specific regulation (i.e. Financials by APRA / ASIC), high political costs (i.e. Utilities and Telecommunications) or intensively competitive markets. Whilst US studies show governance quality varies across industries (Aggarwal & Williamson, 2006) no evidence exist for the Australian business environment. We also investigate whether governance reforms (ASX Principals, 2003 and CLERP 9, 2004) have impacted on industry governance quality. We find the consumer staples, telecommunications, utilities and financials sectors had the best pre reforms governance quality. Our political costs and competition intensity measures show that the subsectors of these 4 industries rank the highest for these measures. It seems that the scrutiny associated with high political costs and the pressures from intense competition do provide incentives for their firms to maintain best governance practises. Also, we find that most industries have significantly better governance in the period post reforms, indicating its impact. Whilst the ASX GCG (2003) appears effective in improving governance quality, it has been more so for firms that had better governance pre reforms. These findings contribute to the understanding of the quality of corporate governance in Australia and suggest that investors should consider this in their investment decisions.

**Keywords:** Corporate Governance, Governance reforms, Political costs, Competition intensity.

**JEL code:** G18, G38, G34, M48

# **Governance quality of Australian industries: the impact of political costs, competition intensity and reforms**

## **1. Introduction**

This study investigates governance quality across Australian industry sectors and whether regulatory reforms (ASX Principles of Good Corporate Governance, 2003 – ASX GCG hereafter, and CLERP 9, 2004<sup>1</sup>) altered this. US Studies<sup>2</sup> identify certain better governed industries (Aggarwal & Williamson, 2006), whilst some Australian industries have more characteristics of good governance (Kang et al. 2007). No indication on overall differences in governance quality across Australia exists. Differences in industry competition, regulation and political costs are likely to result in varying degrees of governance quality. We investigate which Australian industries are best governed and determine whether competition and political costs play a role in industry governance. We also examine whether recent governance reforms have impacted on industry governance. This evidence contributes to an improved understanding of the impact and significance of corporate governance for different sectors of capital markets.

Differences in governance quality across industries are expected for a number of reasons. Firstly, the regulation and required compliance differ across industries. The financial sector, for example, is governed not only by the ASX GCG 2003 and CLERP9, but some firms (i.e. banks and listed investment companies) are also regulated by the Australian Prudential Regulation Authority (APRA) and/or the Australian Securities and Investment commission (ASIC). Therefore firms in such heavily externally monitored industries would be expected to have better corporate governance. Alternatively these industries internal corporate governance might not be so important if there is a “substitution effect” between external and internal regulatory measures (i.e. Kwon et al. 2007 where the value of the audit function decreases when firms are externally governed). However, since

---

<sup>1</sup> Corporations Law economic reform program 9, 2004. Originally released as a discussion paper, Clerp 9 came into law in 2004.

<sup>2</sup> See Loebbecke et al. 1989; Dechow et al. 1996 and Beneish, 1997 for additional evidence on the incidence of fraud in specific industries.

investors value firm governance quality (McKinsey Survey, 2002) and internal and external governance mechanisms are, in fact, complements (not substitutes) (Cremers & Nair, 2003) we propose that such external regulation should enhance not substitute internal governance quality.

Another motivation for expecting industry level variations in governance quality relates to the competitive intensity differences that exist across industries (Ely, 1991; Murphy, 1999). Industry competition should affect its governance quality since it may provide incentives for management to perform better, work harder and to reduce misappropriation (Karuna, 2007; Hart, 1983; Schmidt, 1997). Industries with more competitors and fiercer competition should therefore have better governance. We investigate this issue further by examining competitiveness within Australian industries in relation to governance quality, and specifically whether those industries with most intense competition have best governance.

Some industries (such as banks, utilities etc) face high political costs. These stem from politicians and consumers redistributing resources amongst themselves at the expense of the company through taxes, governance grants etc. (Ikin, 2003). These are highest where close scrutiny from investors (or government) exists. Firms in such industries have incentives to signal the strength of their management system and credibility of financials in an effort to lessen scrutiny (and thus limit costs). Australian industries likely to be subject to such high political costs are identified as the financial, resources, infrastructure and utilities sector (Ikin, 2003). The financial sector is highly regulated and is subject to significant government and investor scrutiny (especially following the Wallis enquiry, 1998 and the more recent global financial crises, 2008). Resources have traditionally been subject to more scrutiny due to generous government tax concession as well as investor concerns over their environmental consciousness (Ikin, 2003). As for infrastructure and utilities, these are industries, often comprised of previously government owned entities (i.e. Telstra) and are likely to be subjected to more scrutiny. We investigate whether industries with high political costs have better governance.

This study makes several contributions to the governance literature. First, whilst prior studies have investigated specific aspects of corporate governance (and its benefits) in Australia (Beeke & Brown, 2006; Benkel et al. 2006; Kang et al. 2007) none have investigated governance quality differences across industries. As governance reforms (ASX Principles of Good Corporate Governance, 2003 and CLERP9, 2004) require significant improvement in compliance and quality of firm's governance, they are likely to have impacted upon industry governance and particularly on those with weak governance (or had governance scandals). The impacts of reforms on governance reforms have not been investigated to date. Lastly, we contribute by linking political costs and competition intensity to governance quality in Australia.

A sample of 474 listed Australian companies for the period 1999 – 2006 is examined. This period is chosen as it includes a number of years prior (1999-2002) and post (2004-2006) introduction of reforms. The sample includes firms from all 10 GICS industries (and 24 sub sectors). We find the utilities, consumer staples; telecommunications and financial sectors had the best governance quality whilst the energy and materials sectors had the worst. Industries with the highest political costs (telecommunications, pharmaceuticals and food & staples) and competition intensity (retailing, commercial services and supplies and food & staples) have significantly better governance. Governance quality improved significantly in most industries post reforms with the exceptions being information technology, utilities and financials. The lack of improvement for financials is of concern, especially given recent worldwide problems in this industry. In addition, the information technology sector has historically been identified as a "fraud" industry (Beasley et al. 2000) and again the failure of reforms to improve governance quality in this sector is of concern.

The remainder of the paper is structured as follows: Section two presents the literature review and research objectives. Section discusses the sample selection, data and methodology. Section four presents both the descriptive statistics and empirical results and Section five concludes the paper.

## 2. Literature and research objectives

Corporate governance includes all measures implemented to realign the goals of managers and shareholders and overcome agency problems. A common manifestation of agency problems is fraud, earnings management or misstatement of financial reports. Managers involve themselves in such activities when they fail to reach targets in a bid to keep share price (and their compensation) high. This behaviour reduces shareholders wealth and is to the detriment of investors who use financial reports to make investment decisions. The extant literature supports the importance of governance for efficient capital markets and finds that good governance decreases the prevalence of earnings management and fraud (Chen-Lung *et al.* 2006; Beasley, 1996; Uzun *et al.* 2004; Klein, 2002). Australian studies confirm that good governance is associated with improved disclosure quality (Beekes & Brown, 2006) and reduced earnings management (Benkel *et al.* 2006). As such good governance is clearly important to ensure market integrity and investors confidence.

The extant US literature shows that governance quality varies across industries (Aggarwal & Williamson, 2006), with the utilities, real estate (excluding REIT's), insurance, materials and capital goods sectors having the best governance. Krishnan (2005) confirms this observation and finds that the incidence of internal control deficiencies is more prominent in certain industries than others. Australian evidence shows that firms in the materials and industrials sector have more independent boards (an oft used proxy for governance) (Kang *et al.* 2007) but a study investigating the overall governance quality in Australian industries has not been completed to date. Country level differences in regulation does exist (La Porta *et al.* 1997, 2000) and we argue these likely stem from disparity in industry and firm governance quality within countries due to different levels of competition and regulatory requirements. Investors appear to be aware of firm level differences so it is likely that investors might also indentify industry governance differences and adjust their valuation accordingly (Francis *et al.* 2005). We therefore investigate which Australian industries have the best and worst governance.

**Our first research objective is therefore to investigate whether there are substantial differences in governance quality across industries.**

There are substantial differences in the governance requirements placed upon industries. This is due to additional requirements made by regulatory bodies such as APRA and ASIC on the many constituents in the financial sector, for instance. One might expect such industries to have better governance quality. There are also differences in the intensity of competition amongst industries (Eli, 1991; Murphy, 1999). Strong competition provides incentives for management to perform better (Hart, 1983; Schmidt, 1997). Those industries with the most intense competition are likely to comply with all (or most) governance requirements in order to maintain its competitive position and comparative advantage within the industry (Ho, 2005). As such we expect firms with more intense competition have better governance quality.

In addition some industries are subject to higher political costs (Ikin, 2003) specifically those under more investor scrutiny. These costs stem from the use of accounting information in a competitive way in order to redistribute profits amongst politicians and consumers (through taxes, tariffs etc) at the expense of the company (Palmade, 2005). Firms in these industries are likely to maintain good governance in an attempt to lessen scrutiny by investors to convince them of sound management practises and credible financial statements. We therefore expect industries with the highest political costs to have better governance quality.

**Our second research objective investigates the relationship between governance quality, political costs and competition intensity.**

Significant governance reforms followed governance scandals in the early 2000's. In Australia HIH Insurance collapsed following severe governance deficiencies and OneTel suffered a similar fate. The ASX Principles of Good Corporate Governance (2003) (ASX GCG hereafter) and CLERP 9 (released as a discussion paper in 2002 and eventually instated in 2004) was introduced to

ensure reforms. These make substantial demands on internal governance calling for independent audit committees that meet regularly amongst other things. Few studies have investigated whether these reforms have improved the quality of corporate governance (Cui et al. 2008) and no study has investigated industry level changes. Given that reforms are aimed at bettering governance one would expect specifically that those firms with the worst quality prior to reforms should improve and so bring them line with other, better governed firms. As such those industries (those that have worse governance quality prior to reforms) should experience more change in governance quality than those already with good quality. Where industries are also regulated by addition regulatory bodies (i.e. banks by APRA), there is likely to be disparity in their governance quality pre reforms as well as post. We therefore compare rankings of industries pre and post reforms to determine whether there are substantial changes. It is possible that firms with good governance prior to reforms have adopted such high quality because investors value it (McKinsey, 2002). As such they are likely to adopt new recommendations (such as the ASX GCG, 2003) and so have even better governance quality post. Weakly governed industries have opted (for whatever reason) not to implement good governance prior to reforms. Since compliance with the ASX GCG (2003) is not mandatory, these firms could potentially still retain low quality governance post reforms.

**The third research objective therefore investigates to what extent the quality of corporate governance of Australian industries changed post governance reforms.**

### **3. Data, Sample Selection and Methodology**

Governance data is hand collected from firm financial statements (obtained from Connect4 and DatAnalysis) whilst information to calculate political costs, competition and control variables is obtained from Aspect Financial Analysis and Connect 4. The sample selection process commenced with 500 ASX listed companies in order to ensure a representative sample including both large and smaller firms. This grouping includes the large firms commonly used in governance studies (ASX 300) as well as smaller firms (randomly selected outside ASX 300) who need not comply with all

governance requirements<sup>3</sup>. The top 300 listed firms were identified in each year. An additional 200 firms (outside the top 300) were then randomly selected to complete the 500 sample firms. Not all sample companies were listed for the full period (1999 – 2006). If a firm delists or lists within the period, its data is included in the sample for as long it remains listed. We then match the remaining companies in the governance dataset to that of the Aspect Financial Analysis Dataset.

The industry representation (GICS classification) includes 21.31% of firms in the “materials” industry, 13.08% in “consumer discretionary”, 21.31% in “financials” and 13.5% from the “industrials” sector. There is almost equal representation from the “energy” (7.38%), “health care” (8.44%) and “information technology” (6.75%) sectors. The remainder consists of “consumer staples” (4.85%), “telecommunications” (1.7%) and utilities (1.7%). Firms were excluded when they could not be matched to the Aspect Financial Analysis database<sup>4</sup> or have missing values. The firms included are from 24 sub-classifications. This leaves a final sample of 474 firms in each of the 8 years investigated across ten GICS industry sectors and 24 subsections (see table 4). For the pre and post reform analysis we exclude 2003 (since the ASX Principles of good Corporate Governance was announced in this period) with 1999 – 2002 the “pre” period and 2004-2006 the “post” period. Corporate governance is measured with the internal governance index of Strydom & Skully (2008). They develop an internal weighted governance index specifically for the Australian market using principal component analysis. It provides a comprehensive measure of internal (firm) governance that overcomes issues with previous, US based efforts<sup>5</sup>. Whilst the commercially available Horwath governance rankings would seem a logical alternative for Australian governance studies, it is

---

<sup>3</sup> In example, CLERP9 require only the top 500 listed companies to have an audit committee.

<sup>4</sup> Due to numerous name and code changes.

<sup>5</sup> US Studies have developed many governance indices (Gompers et al. 2003; Bebchuk et al. 2005; Brown & Caylor, 2006; Larcker et al. 2007) but these suffer from many problems – they include mainly external, anti-takeover measures (Gompers et al. 2003; Bebchuk & Cohen, 2005) in their index which is problematic since evidence show good internal governance is needed in certain instances to ensure functioning of external governance mechanisms (John & Kedia, 2004). Second many indices (Gompers et al. 2003; Bebchuk & Cohen, 2005; Brown & Caylor, 2006) are “arbitrary indices” and naively sum a set of dummy indicators to compute their index value implying equal weighting of governance factors without consideration of correlations between variables. The internal governance model of Strydom & Skully (2008) have sufficient internal reliability (Cronbach alpha = 0.76).

compiled only for Australia's largest firms and then only from 2002. A higher internal governance score indicates better governance quality.

Competition intensity is measured by the extent of control and concentration, using the measure employed in Karuna (2007) that calculates the proportion of sales accounted for by the 4 largest firms in the industry. Given the nature of business for banks insurance companies and real estate investment trusts this measure cannot be calculated accurately and so they are as such excluded from the analyses.

Following Panchapakesan & McKinnon (1992) we investigate industry political costs by examining company size (Sales revenue / total assets). Again due to the nature of most financials (banks, insurance companies, real estate and real estate investment trusts) a sales revenue figure is not available and as such these subsections are excluded from this analysis. In addition four subsections have only one observation each (construction materials, paper and forest products, pharmaceuticals and biotechnology as well as semiconductors) and these 4 are excluded as well (see table 4 for subsector firm numbers). This leaves a total sample of 384 firms for the analyses of political costs and competition intensity.

Regression models:

The following regression models are employed to investigate our research objectives. The first model employed investigates the quality of corporate governance across industries to answer the question whether there are significant industry-level differences in internal governance quality.

$$IGS_{i,t} = \alpha_0 + \beta_1 PROF_{i,t} + \beta_2 BM_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 CDS_{i,t} + \beta_5 ENERGY_{i,t} + \beta_6 FIN_{i,t} + \beta_7 HLT_{i,t} + \beta_8 IND_{i,t} + \beta_9 MAT_{i,t} + \beta_{10} IT_{i,t} + \beta_{11} TC_{i,t} + \beta_{12} UT_{i,t} + \epsilon_t \quad (1)$$

Where IGS is the internal governance score of Strydom & Skully (2008), PROF is profitability (ROA), BM is book to market value, SIZE = log market value of equity, CDS is a industry dummy for consumer discretionary and staples, ENERGY is an industry dummy, FIN is the financial sector industry dummy, HLT is the healthcare sector dummy, IND is the industrial sector dummy, MAT is the material sector dummy variable, IT the information technology sector dummy variable, TC is telecommunication sector dummy and UT is utility sector dummy.

The second model employed investigates the relationship between political costs, competition intensity and governance quality. Industries are ranked on their competition intensity and political cost values (where a rank of 1 = the most intense competition and highest political costs) and included in the regression.

$$IGS_{i,t} = \alpha_0 + \beta_1 PROF_{i,t} + \beta_2 BM_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 COMP_{i,t} + \beta_5 PC_{i,t} + \varepsilon_t \quad (2)$$

Where IGS is the internal governance score of Strydom & Skully (2008), PROF is profitability (ROA), BM is book to market value, SIZE = log market value of equity, COMP is a measure for competition intensity and PC is a measure for political costs.

The third regression model investigates governance quality post reforms for each industry to determine whether significant change has occurred. For each industry  $i$ , we employ the following model:

$$IGS_{i,t} = \alpha_0 + \beta_1 PROF_{i,t} + \beta_2 BM_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 REF_{i,t} + \varepsilon_t \quad (3)$$

Where IGS is the internal governance score of Strydom & Skully, (2008), PROF is profitability (ROA), BM is book to market value, SIZE = log market value of equity and REF is the reference period dummy where a value of 0 is assigned pre governance reforms and 1 post reforms.

## 5. Results

### Descriptive statistics and t-tests

As is evident from table 1, the minimum governance score for the sample is 0.95, indicating that such firms have few qualities of good governance (and thus lower quality). The maximum score is 9.95; such firms would have good governance quality. The pre and post IGS variables reflect an improvement in corporate governance quality following the reforms - the mean overall post IGS score (6.68) is higher than pre IGS score (5.65). A t-test confirms that this is a statistically significant change (t-value = 3.03\*\*\*). Table 1 also presents the descriptive statistics for the control variables in this study.

**Table 1**  
**Descriptive statistics for governance quality and control variables of the sample**

Variable	Mean	Median	Std				
			Deviation	Min	Q1	Q3	Max
IGS	5.82	5.95	2.371	0.95	4.07	7.65	9.95
Pre IGS	5.65	5.61	2.603	0.89	3.725	7.51	14.84
Post IGS	6.68	6.61	2.991	0.89	4.74	8.74	15.14
Size	18.68	18.69	2.02	14.5	17.06	20.11	25.04
Prof	-0.055	0.05	0.406	-2.65	-0.095	0.08	5.67
BM	0.617	0.53	0.455	-0.78	0.32	0.81	4.52

Where IGS = Internal corporate governance score; Pre IGS is the internal governance score for the period pre reforms; Post IGS is the internal governance score for the period following governance reforms; Size is log market value of equity; Prof is profitability, measured by return on assets and BM is book to market value. Min (minimum observed value), Q1 (value at quartile 1), Q3 (value at quartile 3), Max (maximum value) is descriptive values for the data in order to provide an overview of the distribution.

All 10 GICS (global industry classification system) industries are represented in the 474 sample firms. The average overall governance score and control variables for each industry is presented in table 2. The consumer staples and telecommunications sectors have the highest overall IGS scores (8.68 and 7.58 respectively) whilst the energy and materials sector (5.12 and 5.54) have the lowest. This differences in means is statistically significant (T-value = -3.22\*\*\*)<sup>6</sup> so that firms from the consumer staples and telecommunications sectors have statistically significant better governance than those from energy and materials sector.

**Table 2**  
**Mean governance quality and control variable values by industry**

Industry	# Firms	IGS	Avg Size	Avg BM	AVG Prof
Consumer Discretionary	62	6.65	19.193	0.664	0.038
Consumer Staples	23	8.68	19.729	0.877	0.057
Energy	35	5.12	18.752	0.695	-0.108
Financials	101	6.70	19.056	0.818	0.024
Health Care	40	6.29	18.466	0.365	-0.209
Industrials	64	6.87	18.887	0.589	0.134
Information Tech	32	5.63	18.328	0.391	-0.301
Materials	101	5.54	18.253	0.643	-0.103
Telecommunications	8	7.58	18.961	0.542	-0.093

<sup>6</sup> Results from t-tests are not presented in this paper but is available from the author on request.

Utilities	8	7.41	19.922	0.659	0.043
-----------	---	------	--------	-------	-------

Where Industry is the industry classification as per the GICS method, #Firms is the number of sample firms that are classified in that industry, IGS is the average internal governance score for each firm, AVG Size, AVG BM, and AVG PROF is the average size, book to market value, price earnings ratio and profitability ratio for each firm in the industry.

The pre and post reforms governance quality ranks in table 3 show that the best pre reform governed industries are utilities (rank1, pre IGS = 8.04), consumer staples (rank 2, average pre IGS score = 7.78) and telecommunications (rank 3, pre IGS score 6.62); these also are the best overall governed industries (see table 2). The worst governed industries prior to reforms include the energy (rank 10, pre IGS = 4.773) and information technology sectors (rank 9, pre IGS score = 5.34). The worst governed industries should show the most significant governance quality improvements post reform since they were in essence the target of reforms (i.e. many companies and industries already met most of the reform requirements prior to their introduction and so one would not expect a significant change in their quality post).

**Table 3**  
**Pre and post reform governance scores and rank by industry**

Industry	Pre IGS	Pre Rank	Post IGS	Post Rank	T-test IGS Pre vs Post
Consumer Discretionary	5.74	6	7.06	6	-3.00***
Consumer Staples	7.78	2	8.98	1	-1.23
Energy	4.77	10	5.21	10	-0.50
Financials	6.44	4	7.21	5	-1.38
Health Care	5.59	7	7.03	7	-2.0*
Industrials	6.22	5	7.38	4	-2.95***
Information Tech	5.34	8	5.81	9	-0.75
Materials	4.96	9	5.85	8	-1.79*
Telecommunications	6.62	3	7.74	2	-0.61
Utilities	8.04	1	7.72	3	0.29

Where Industry is the industry classification as per the GICS, PRE IGS is the average internal governance score for each firm before governance reforms, PRE rank is the rank (where 1 is best and 10 worst) of each industry pre reforms, POST IGS is the average internal governance score for each firm after governance reforms, Post rank is the rank (where 1 is best and 10 worst) of each industry post reforms.

The post reforms IGS scores, shown in table 3, present some interesting results. The weakest pre reform industry (energy) shows no significant improvement in governance quality following reforms and still ranks very low (rank 10 IGS score 5.21). The information technology (9<sup>th</sup>), Materials (8<sup>th</sup>) and Healthcare (7<sup>th</sup>) sectors are similar and still ranked lowest in the post period. It therefore appears that the worse governed firms have not made much improvement; in fact they all still rank very low. In contrast, those ranked higher pre reforms (utilities, telecommunications and consumer staples) are still in the top 4 ranked industries in the post period. The high governance quality in the industrial, utilities and telecommunications sectors can potentially be explained by the high political costs in these industries (see political costs scores in table 4). Financials, an industry subject to external regulation through APRA and or ASIC lost a place (from 4<sup>th</sup> to 5<sup>th</sup>) post reforms and showed no significant improvement.

Overall it appears Australia's governance reforms have improved the quality of already good governed firms whilst those with low quality have bettered only marginally.

**Table 4**  
**Industry subsector political cost and competition ranks**

<b>Sector</b>	<b># firms</b>	<b>IGS</b>	<b>PRE IGS</b>	<b>POST IGS</b>	<b>Political Costs Rank</b>	<b>Competition Rank</b>
Automobile & Components	7	6.37	5.24	7.36	9	9
Banks	10	10.20	9.60	11.38	.	.
Capital Goods	34	6.71	5.92	7.19	17	6
Commercial Services & Supplies	18	7.10	6.70	7.62	16	2
Construction Materials	1	8.82	.	8.82	.	4
Consumer Durables & Apparel	9	5.86	4.99	6.49	13	5
Consumer Services	11	6.94	6.13	7.06	7	14
Diversified Financials	37	5.71	4.68	6.27	4	22
Energy	35	5.12	4.77	5.21	10	21
Food & Staples Retailing	7	9.64	8.00	9.04	3	3
Food Beverage & Tobacco	16	8.27	7.69	8.96	15	10
Health Care Equipment & Services	24	6.65	6.01	7.26	12	8
Insurance	7	10.33	10.64	10.73	.	.
Materials	87	5.50	4.98	5.85	14	20
Media	18	7.08	6.69	7.20	19	17
Metals & Mining	12	5.56	4.81	5.39	8	18
Paper & Forest Products	1	5.95	4.70	7.63	.	19

Pharmaceuticals & Biotechnology	1	6.82	.	7.30	.	25
Pharmaceuticals, Biotechnology & Life Sciences	15	5.70	4.64	6.67	2	23
Real Estate	42	5.98	5.15	6.45	.	15
Real Estate Investment Trusts	5	8.07	6.19	8.89	.	.
Retailing	17	6.56	5.48	7.12	18	1
Semiconductors & Semiconductor Equipment	1	5.32	.	5.32	.	26
Software & Services	22	5.42	5.21	5.69	20	13
Technology Hardware & Equipment	11	5.97	5.39	6.04	11	7
Telecommunication Services	8	7.59	6.62	7.74	1	16
Transportation	10	7.23	6.55	7.90	6	11
Utilities	8	7.41	8.04	7.72	5	24

The political costs and competition intensity scores reveal that the telecommunications sector has the highest political costs (rank 1 in table 4) with a governance score of 7.59 overall. Other industries with high political cost rankings include the pharmaceuticals, food and staples and utilities sectors. They are also included in the highest ranked industries from table 3, consistent with our prediction that industries with higher political costs are likely to have better governance. In regards to competition, the retailing, commercial services and supplies and food and staples retailing have the most intense competition. These subsectors also have relatively high governance scores as indicated in table 4 (and corresponding with ranks in table 3).

### **Regression results**

The results from descriptive statistics and t-tests indicate that firms in the consumer staples, utilities and telecommunications industries have significantly better governance both in the pre, post and overall period. In addition we find that there are improvements in governance scores mostly in those industries that were well governed prior. We now extend our analysis and investigate these issues through regression models.

Table 5 presents the results from the regression investigating governance quality within Australian industries pre reforms. As is evident from table 5, consumer staples, financials, industrials

and telecommunications industry have significantly better governance. In contrast, the materials sector is significantly associated with low governance quality.

**Table 5**  
**Regression results for the governance quality of Australian industries**

This table presents the results from the investigation of the governance quality of the different industries within the Australian market. The regression is tested with the following equation:

$$IGS_{i,t} = \alpha_0 + \beta_1 PROF_{i,t} + \beta_2 BM_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 CDS_{i,t} + \beta_5 ENERGY_{i,t} + \beta_6 FIN_{i,t} + \beta_7 HLT_{i,t} + \beta_8 IND_{i,t} + \beta_9 MAT_{i,t} + \beta_{10} IT_{i,t} + \beta_{11} TC + \beta_{12} UT + \epsilon_t$$

Where IGS is the internal governance score developed in this study, PROF is profitability (ROA), BM is book to market value, SIZE = log market value of equity, CDS is a industry dummy for consumer discretionary and staples, ENERGY is an industry dummy, FIN is the financial sector industry dummy, HLT is the healthcare sector dummy, IND is the industrial sector dummy, MAT is the material sector dummy variable, IT the information technology sector dummy variable, TC is telecommunication sector dummy and UT is utility sector dummy. For each sector dummy variables a value of 1 is assigned when a firm is in the relevant industry and 0 otherwise. The coefficient and t-statistic is presented for each variable in the regression with a \*, \*\*, \*\*\* indicating significance at the 90%, 95% and 99% level respectively.

		Coefficient	t-statistic
$\alpha_0$	Intercept	1.90	2.35**
$\beta_1$	Profitability (PROF)	1.365	4.32***
$\beta_2$	Book-to-Market ratio (BM)	-0.664	-2.47***
$\beta_3$	Log market value of equity (SIZE)	0.232	5.91***
$\beta_4$	Consumer staples (CS)	2.708	4.61***
$\beta_5$	Consumer Discretionary (CD)	0.772	1.89*
$\beta_5$	Energy sector dummy (ENERGY)	-0.478	-0.98
$\beta_6$	Financial sector dummy (FIN)	1.758	4.68***
$\beta_7$	Healthcare sector dummy (HLT)	0.707	1.49
$\beta_8$	Industrial sector dummy (IND)	0.908	2.25**
$\beta_9$	Material sector dummy (MAT)	-1.126	-1.81*
$\beta_{10}$	Information Technology dummy (IT)	0.202	0.41
$\beta_{11}$	Telecommunications (TC)	1.772	1.93*
$\beta_{12}$	Utilities (UT)	1.26	1.36
	Adjusted R-squared	0.2026	
	F-statistic	11.01	
	Total observations	474	

Next we investigate the relationship between governance quality, political costs and competition intensity. The values for political costs and competition intensity are rankings as

presented earlier in table 4. As such since the highest political costs and most intense competition ranked industries are given a ranking of 1, we expected a negative relationship for those two variables. Results in table 6 indicate that firms with high political costs and competition intensity have better corporate governance, consistent with our prediction. The coefficient of both political costs (-0.0757, t-value = -3.00\*\*\*) and competition intensity (-0.065, t-value -3.78\*\*\*) are both negative and statistically significant.

**Table 6**  
**Regression results for the effect of political costs and competition intensity on governance quality**

This table presents the results from the investigation of the relationship between governance quality, political costs and competition. The regression is tested with the following equation:

$$IGS_{i,t} = \alpha_0 + \beta_1 PROF_{i,t} + \beta_2 BM_{i,t} + \beta_3 PE_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 COMP_{i,t} + \beta_6 PC_{i,t} + \epsilon_t$$

Where IGS is the internal governance score developed in this study, PROF is profitability (ROA), BM is book to market value, SIZE = log market value of equity, COMP is a measure of competition intensity and PC is political costs. The coefficient and t-statistic is presented for each variable in the regression with a \*, \*\*, \*\*\* indicating significance at the 90%, 95% and 99% level respectively.

	Coefficient	t-statistic
$\alpha_0$ Intercept	-1.71	-1.75*
$\beta_1$ Profitability (PROF)	1.157	3.76***
$\beta_2$ Book-to-Market ratio (BM) Log market value of equity	0.118	0.48
$\beta_3$ (SIZE)	0.534	12.16***
$\beta_4$ Political Costs (PC)	-0.0757	-3.00***
$\beta_5$ Competition Intensity (COMP)	-0.065	-3.78***
<hr/>		
Adjusted R-squared	0.3571	
F-statistic	43.56	
Total observations	384	

Next we investigate whether industry governance quality has changed significantly post reforms. An individual regression is computed for each industry. The results or the reference dummy from each regression is presented in table 7. If the reference dummy is significant, it suggests a

change in governance quality post reforms. Note that only the t-value, significance for the reference dummy (REF) is reported for each industry along with the F value for the model<sup>7</sup>. The number of sample firms in each industry was presented in table 2.

**Table 7**  
**Comparison of change in governance quality post reforms by industry**

This table presents a summary of the results from individual regressions of:  $IGSi,t = \alpha_0 + \beta_1PROFi,t + \beta_2BMi,t + \beta_3SIZEi,t + \beta_4REFi,t + \epsilon_t$  for each industry. T-value is that from the regression for each industry where \*, \*\*, \*\*\* indicate significance at the 90, 95 and 99% levels respectively. F-statistic presents the statistic from each regression model

Industry	REF	F-statistic
Consumer Discretionary (CD)	5.05***	26.94
Consumer Staples (CS)	4.24***	9.35
Energy (ENERGY)	2.79***	30.75
Financials (FIN)	1.60	5.30
Healthcare (HLT)	4.63***	21.17
Industrials (IND)	3.35***	6.86
Materials (MAT)	4.53***	72.02
Information Technology (IT)	0.64	11.29
Telecommunications (TC)	3.33**	11.70
Utilities (UT)	0.63	2.09

As is evident from table 7 the most significant improvement in governance quality post reforms is in the consumer discretionary sector (t-value 5.05\*\*\*) and healthcare sector (t-value 4.63\*\*\*). Both consumer staples and materials also improve substantially (t-values = 4.24\*\*\* and 4.53\*\*\* respectively). There is no statistically significant improvement in the financial, information technology and utilities sector. Whilst energy and materials improves significantly, they are still ranked lowest post reforms. This finding of low overall governance quality in the IT sector is consistent with US findings (Aggarwal & Williamson, 2006). Overall, however, the reforms seem to have impacted positively on the quality of governance in most industries.

<sup>7</sup> Complete results for each industry are available from the authors on request.

As mentioned earlier a statistically significant improvement occurs in the governance quality of the financial industry. This is noteworthy since one of largest Australian governance scandals (HIH Insurance) occurred in this industry prior to reforms (t-value = 4.01\*\*\* and rank improved from 6<sup>th</sup> to 4<sup>th</sup>).

## **6. Conclusion**

This study investigated the quality of corporate governance for Australian firms across industries following US findings that their governance quality varies significantly (Aggarwal & Williamson, 2006). We proposed that firms with higher political costs and competition intensity should have better governance quality. After determining the governance quality of Australian industries, we then investigate whether governance reforms (ASX GCG and CLERP9) impacted on the corporate governance quality of Australia industries.

We find that firms in the consumer staples and telecommunication sectors had the best quality corporate governance pre reforms whilst energy and materials had the worst. Political costs and competition intensity appears a driver of governance quality since our results show significantly better governance for industries with high political costs and competition. When investigating changes in the quality of governance post reforms, most industries have improved. The only industries that has not shown significant improvement is the information technology, financials and utilities sectors. The result for information technology is worrying since it is a sector identified in prior research (Beasley et al. 2000; Loebbecke et al. 1989; Dechow et al. 1996) to be prone to fraud. Also of concern given recent world events is the lack of significant improvement in the governance quality of financials. It appears as if reforms have resulted in better quality for firms that already ranked highest pre reforms, but did not improve the ranking of those industries with low governance quality prior to the ASX GCG (2003).

This study is the first to investigate the quality of corporate governance across industries in the Australian environment. It is also the first Australian study to link political costs and competition intensity to governance quality and provide evidence of some non-regulatory pressures that force companies to have good governance. The investigation of governance quality post reforms across industries is also a significant contribution as it provides support for the effectiveness of these reforms.

The findings in this study have implications for investors, firms and regulators. Investors should take note of industries that have better (worse) corporate governance and incorporate this information into their pricing decision. Firms in industries that have better quality governance can promote this to their investors and potentially benefit. It appears that governance reforms have been effective in increasing the quality of corporate governance and regulators can take note of this finding. They should also note though that reforms are most effective for industries that already had good governance and that those with low quality showed little or no improvement. Future research could investigate whether misappropriation has reduced in industries that have improved governance quality post reforms.

## 7. References

- Aggarwal, R., Williamson, R.G., 2006. Did New Regulations Target the Relevant Corporate Governance Attributes?(April 14, 2006). Available at SSRN: <http://ssrn.com/abstract=891411>
- Australian Securities Exchange, [ASX Principles of Good Corporate Governance 2003] (Australian Securities Exchange, Sydney)[viewed 4 Sep.2006], available from <http://www.shareholder.com/shared/dynamicdoc/ASX/364/ASXRecommendations>
- Beasley, M.S., 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review* 71, 443-465.
- Bebchuk, L. A., Cohen, A., Ferrell, A., 2004. What Matters in Corporate Governance? Harvard Law School John M. Olin Center Discussion Paper No. 491 Available at SSRN: <http://ssrn.com/abstract=593423>
- Beekes, W., Brown, P., 2006. Do better-governed Australian firms make more informative disclosures? *Journal of Business Finance & Accounting* 33, 422-450.
- Beneish, M.D., 1997. Detecting GAAP Violation: Implications for assessing earnings management among firms with extreme financial performance. *Journal of Accounting and Public Policy* 16, 271-309.
- Benkel, M., Mather, P., Ramsay, R., 2006. The association between corporate governance and earnings management: The role of independent directors. *Corporate Ownership & Control* 3, 65-75.
- Brown, L., Caylor, M.L., 2006. Corporate governance and firm performance. *Journal of Accounting and Public Policy* 25, 409-434.
- Chen-Lung, C., Kleinman, G., Picheng, L and L. Mei-Feng, 2006. Corporate ownership structure and accuracy and bias of mandatory earnings forecast: Evidence from Taiwan. *Journal of International Accounting Research* 5, 41-62.
- Commonwealth Law, [Corporations Law Economic Reform Program Act 2004] (Attorney General's Department, Canberra) [viewed 6 Sep. 2006], available from [http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/3B3EE9EA6EFA3DA7CA256F7100581F1B/\\$file/1032004.pdf](http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/3B3EE9EA6EFA3DA7CA256F7100581F1B/$file/1032004.pdf)
- Cremers, K. J. M., Nair, V.B., 2005. Governance mechanisms and equity prices. *The Journal of Finance* 60, 2859-2894.
- Cronbach, L. J., 1951. Coefficient alpha and the internal structure of tests, *Psychometrika* 16, 297-334.
- Cui, T.Q., Evans, E., Wright, S., Crowe, S., 2008. Have the objectives of the ASX recommendations on good corporate governance been achieved? Working paper, Macquarie University.

- Dechow, P.M., Sloan, R.G., Sweeney, A.P., 1996. Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research* 13, 1-36
- Ely, K.M., 1991. Inter industry differences in the relation between compensation and firm performance variables. *Journal of Accounting Research* 29, 37-58.
- Francis, J., LaFond, R., Olsson, P., Schipper, K., 2005. The market pricing of accruals quality. *Journal of Accounting & Economics* 39, 295-327.
- Gompers, P., Ishii, J., Metrick, A., 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118, 107-155.
- Hart, O., 1983. The market mechanism as an incentive scheme, *Bell Journal of Economics* 13, 366-382.
- Ho, C., 2005. Corporate governance and corporate competitiveness: an international analysis. *Corporate Governance* 13, 211-253.
- Ikin, C., 2003. Political cost influences on the determinants of non auditing services. Working Paper, Australian National University.
- John, K., Kedia, S., 2004. Institutions, markets and growth: a theory of comparative corporate Governance. Working paper, New York University.
- Kang, H., Cheng, M., Gray, S.J., 2007. Corporate governance and board composition: diversity and independence of Australian boards. *Corporate Governance* 15, 194-207.
- Karuna, C., 2007. Industry product market competition and managerial incentives. *Journal of Accounting and Economics* 43, 275-297.
- Klein, A., 2002. Audit committee, board of director characteristics, and earnings management. *Journal of Accounting & Economics* 33, 375-400.
- Krishnan, J., 2005. Audit committee quality and internal control: an empirical analysis. *The Accounting Review* 80, 649-675.
- Kwon, S.Y., Lim, C.Y., Tan, P.M., 2007. Legal systems and earnings quality: the role of auditor industry specialization. *Auditing: A Journal of Practice and Theory* 26, 25-55.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1997. Legal determinants of external finance. *Journal of Finance* 52, 1131-1150.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 2000. Investor protection and corporate governance. *Journal of Financial Economics* 58, 3-27.
- Larcker, D.F., Richardson, S.A., Tuna, A.I., 2005. How Important is Corporate Governance?. Available at SSRN: <http://ssrn.com/abstract=595821>.
- Larcker, D.F., Richardson, S.A., Tuna, I., 2007. Corporate governance, accounting outcomes and organizational performance. *Accounting Review* 82, 963-1008.

Loebbecke, J.K., Eining, M.M., 1989. Auditors' Experience with Material Irregularities: Frequency, Nature and Delectability. *Auditing* 89, 1-29.

McKinsey and Company, 2002. Global investor opinion survey on corporate governance, available at:

<http://www.mckinsey.com/clientservice/organizationleadership/service/corpgovernance/pdf/GlobalInvestorOpinionSurvey2002.pdf>

Murphy, K., 1999. Executive compensation. In: O. Ashenfelter and D. Card, Editors, *Handbook of Labor Economics*, North-Holland, Amsterdam, 2485–2563.

Palmade, V., 2005. Industry level analysis: the way to identify the binding constraints to economic growth. *World bank policy research working paper* 3551.

Panchapakesan, S., McKinnon, J., 1992. Proxies for Political Visibility: A Preliminary Examination of the Relation Among Some Potential Proxies. *Accounting Research Journal*, 71–80.

Schmidt, K., 1997. Managerial incentives and product market competition, *Review of Economic Studies* 64 , 191–213.

Strydom, M., Skully, M., 2008. Governance Indices: Australian perspective. *Corporate Ownership and Control*, forthcoming.

Uzun, H., Szewczyk, S.H., Varma, R., 2004. Board composition and corporate fraud. *Financial Analysts Journal* 60, 33-43.

---

\* We would like to thank participants at the AFAANZ Annual conference in Sydney, 2008 and PBFEAM conference in Brisbane, 2008 for comments on part of this paper. Additional thanks to FIRN for scholarship support to attend informative events that have improved this paper.