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Rebecca Brown works for the Australian Treasury. Tue Gørgens works for the Australian National University in the Research School of Social Sciences, Social Policy Evaluation, Research and Analysis Centre.

ABSTRACT

The concept of corporate governance has attracted considerable attention, domestically and internationally, in recent years. Previous research, largely conducted using international data, has suggested that better governed firms outperform poorer governed firms in a number of key areas. This paper examines the relationship between a company's adoption of the Australian Securities Exchange (ASX) Corporate Governance Council's Principles of Good Corporate Governance and Best Practice Recommendations (ASX Corporate Governance Principles) and its financial performance in the areas of shareholder performance, operating performance and one-year sales growth for the top 300 Australian listed companies. Our results suggest that companies demonstrating greater compliance with the ASX Corporate Governance Principles outperform less compliant companies in each of these three financial areas.

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CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE IN AN AUSTRALIAN CONTEXT

Rebecca Brown and Tue Gørgens

1. INTRODUCTION

Over the past decade, the governance of companies has attracted much attention. Following a number of high profile corporate collapses, such as HIH insurance and One.Tel in Australia, and Enron and WorldCom in the United States (US), a number of regulatory changes aimed at improving corporate governance have been implemented.[1] In the US, the Sarbanes-Oxley Act 2002 (SOX), also know as the Public Company Accounting Reform and Investor Protection Act 2002, regulates boardroom accountability and provides the Securities and Exchange Commission with an enhanced policing role in corporate governance matters (De Nicolo, Laeven and Ueda 2008; Dignam 2007). While SOX introduced formal regulation, many other countries chose to adopt a more flexible approach by way of formal guidelines or recommendations based on the 'comply or explain' principle. The German Corporate Governance Code and the Swiss Code of Best Practice are two examples. In Australia, two major corporate governance reforms were implemented: *the Corporate Law Economic*

1 That being said, corporate governance should not be considered solely in light of corporate collapses, which will inevitably occur in a competitive market. The cost and benefit of regulation in this, and any, area should be assessed before introduction, and the performance of that regulation monitored over time.

Reform Program (Audit Reform and Corporate Disclosure) Act 2004 and the Australian Securities Exchange (ASX) Corporate Governance Council's Principles of Good Corporate Governance and Best Practice Recommendations (ASX Corporate Governance Principles) (Beckley, Dubiel, Elia, Lyons, Parker, Perrett, Whittle and Wu 2005).

Corporate governance has been described by the Organisation for Economic Cooperation and Development (OECD) as a set of relationships between a company's management, its board, its shareholders and other stakeholders (OECD 2004). As owners of the company, the shareholders elect the directors to oversee the operation and performance of the business on their behalf. The directors are accountable to the body of shareholders that elect them (Tirole 2006). More recently, investors are increasingly demanding from companies that investments have regard to environmental, social and governance factors. Good corporate governance should facilitate effective monitoring and provide proper incentives for the board and management to follow objectives that are in the interests of the company and its shareholders (OECD 2004).

Corporate governance has become an important topic for investors, firms and governments as they recognise the need to compete domestically as well as globally. Corporate governance is now recognised as a key business discipline, assisting economic growth and maintaining and promoting investor confidence (The HIH Royal Commission Report 2003). A company's corporate governance structure influences a number of aspects of its business model including: the setting of company objectives and how those objectives are to be achieved; the monitoring and assessment of risk; and performance optimisation (ASX 2007). Corporate governance structures and practices also play an important role in

determining the cost of capital in the global capital market. According to the OECD (2004), the presence of an effective corporate governance system, within individual companies and across an economy as a whole, assists in providing the confidence necessary for the proper functioning of a market economy. As a result, the cost of capital is reduced and firms are encouraged to become more efficient in the use of company resources (ASX 2007).

Previous research has also suggested that the legal protection of investors is important in assisting the development of a country's financial markets. It is suggested that, at the company level, high performing boards are more attractive to investors than poor performing boards (Clarke, Klettner, Adams and Boyce 2007). Investors will be more willing to finance firms when their rights are protected as better protection provides a greater chance that company profits will be returned as interest or dividends as opposed to being expropriated by those who control the company (La Porta, Lopez-de-Silanes, Shleifer and Visney 2002).

In this paper, we use the ASX Corporate Governance Principles to create a corporate governance measure for the top 300 Australian listed companies (ASX 300) and relate this measure to the financial performance (earnings per share, return on assets and one-year sales growth) of each company in 2004, 2005 and 2006. We find that companies with better corporate governance outperform poorly governed companies, particularly in relation to earnings per share and return on assets. Furthermore, we find that companies that are fully compliant with the ASX Corporate Governance Principles perform better than companies that are only partially compliant. Our results also indicate that companies may find it beneficial to focus their efforts on improving corporate governance in the areas of board composition, remuneration, the formation of committees (that

is, board, audit and remuneration committees), and those principles related to the structure of the company.

While our results are positive, it is important to note that the governance structures of a firm are endogenous, making it difficult to draw causal inferences. For example, while it is possible that companies that choose to comply with the ASX Corporate Governance Principles will perform better because of it, it is also possible that companies that perform better are more likely to choose to comply as it is easier for them to do so when things are going well. For this reason, we make no assumptions about the direction of any relationships we find.

Our paper proceeds as follows. Section two provides a review of the related literature. While this is not an exhaustive literature review, we examine some of the more important papers and a number of papers closely related to our study.[2] This section reviews studies conducted in the US, Australia, Germany, Great Britain, Korea and Switzerland. Section three outlines the recent reforms to corporate governance in Australia, providing a detailed explanation of the ASX Corporate Governance Principles and the motivation behind their introduction. Section four describes our data sources and summary statistics. Section five documents our findings and empirical relationships between corporate governance and financial performance. Finally, section six provides a summary and identifies areas for further research.

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2 See Shleifer and Vishney (1997), John and Senbet (1998) and Hermalin and Weisbach (2003) for more extensive literature reviews.

2. REVIEW OF RELATED LITERATURE

2.1 Australian research

Goldman Sachs JBWere, an Australasian investment banking and management firm, published a research report in 2006 examining the link between company corporate governance ratings and investment performance for Australian companies over the period August 2001 to February 2006. The report assessed company ratings for various key governance perspectives. Four measures were used to determine a company's corporate governance rating: accounting quality, policies and disclosure; audit quality; board structure (board skills included as a sub category); and remuneration. A six-tiered scoring system was used, whereby zero represented the 'worst' governed firms and five represented the 'best'. Equally weighted portfolios were constructed, purchasing stocks in the top half (those ranked three to five) and selling stocks in the bottom half (those ranked zero to two), with price returns calculated for each portfolio.

The report revealed that if investors bought shares in companies that exhibited elements of good corporate governance they were likely to outperform the market. Similar results were achieved if poorly rating companies were sold short. Additionally, if the company's board had relatively superior skills, it was more likely to experience positive unexpected earnings results.

Goldman Sachs also found a profitable investment signal in the corporate governance ratings for the 2006 financial year, whereby an investment strategy that purchased shares in top-rated companies and sold shares in bottom-rated companies would have generated returns in excess of a passive market return. The top-rated companies in the areas of board skills, overall board, audit and

remuneration had share values that outperformed the market and, conversely, the bottom-rated companies had stocks that under-performed the market.

BDO Kendalls, a worldwide network of public accounting firms, released a research report in 2007 assessing the corporate governance structures of 150 mid-sized Australian companies (based on average capitalised value). The report contained an overall assessment of each company's corporate governance structures, comprising a star rating out of five and a relative ranking. The research model was based on disclosure of information related to: the company's board of directors and committees; the perception by external auditors of the company's level of independence; and disclosures about share trading policy, code of conduct, and risk management. The report found only two companies that achieved a five star rating but 13 companies that scored a one star rating. The research results suggested that there had been a deterioration in the corporate governance of mid-cap companies within Australia.

2.2 US research

A 2005 report released by Institutional Shareholder Services found that lower risk, better profitability and higher valuation were all associated with companies that had better corporate governance structures. These companies outperformed poorly governed firms based on return on investment, annual dividend yield, net profit margin and price to earning ratio. The best governed companies outperformed the worst governed companies on 13 out of 16 financial performance measures, supporting the proposition that better corporate governance leads to superior financial performance.

Gompers, Ishii and Metrick (2003), in their paper 'Corporate Governance and Equity Prices', derived a 24-factor Governance Index ('G-Index'), to proxy the level of shareholder rights using Investor Responsibility Research Centre Data for 1,500 US firms throughout the 1990s. The index ranged from 0 to 24, adding one point for every provision that restricted shareholder rights. The study found a positive link between the quality of corporate governance and corporate performance, revealing that firms with fewer shareholder rights had lower firm valuation and lower stock returns. Gompers et al. also revealed that an investment strategy purchasing shares in the firms with the lowest governance index score (strongest shareholder rights) and selling shares in firms with the highest governance index score (weakest shareholder rights) outperformed the market by 8.5 per cent throughout the study period, supporting the proposition that companies with better corporate governance rankings were higher valued and had higher profits than those companies with a worse ranking.

Brown and Caylor (2004), in their paper 'Corporate Governance and Firm Performance', created a measure of corporate governance ('Gov-Score'), based on data provided by Institutional Shareholder Services. Gov-Score comprised 51 factors covering eight corporate governance categories: audit; board of directors; charter/bylaws; director education; executive and director compensation; ownership; progressive practices; and state of incorporation. For over 2,300 firms, Brown and Caylor relate Gov-Score to six performance measures over three categories: operating performance (return on equity, net profit margin, sales growth); valuation (Tobin's Q); and shareholder payout (dividend yield, stock repurchase). This study found that better governed firms were relatively more profitable, more valuable and paid out more cash to shareholders, while poorly governed firms had lower operating performance

and paid out less cash to shareholders. Additionally, Brown and Caylor found that firms with independent boards had higher returns on equity, higher profit margins, larger dividend yields and larger stock repurchase. They went on to suggest that limiting board size leads to improved firm performance as the increased monitoring benefits of larger boards were outweighed by poorer communication and decision-making.

2.3 International research

La Porta, Lopez-de-Silanes, Shleifer and Visney (2002) examined 539 large firms from 27 countries to test the effects of legal protection of minority shareholders and of cash-flow ownership by a controlling shareholder on the valuation of firms. They found evidence that countries with better minority shareholder protection, and firms with higher cash-flow ownership by the controlling shareholder, had higher firm valuations.

In Germany, Drobetz, Schillerhofer and Zimmermann (2003) created a corporate governance rating (CGR) for German listed firms. They investigated whether firm-specific corporate governance differences explained expected returns in a cross-section of firms within a single jurisdiction, finding a positive relationship between CGR and firm value. Drobetz et al. also found that an investment strategy that bought high-CGR firms and shorted low-CGR firms would have earned superior returns during the sample period.

In Great Britain, Selvaggi and Upton (2008) examined the correlation between good corporate governance, operating performance and share-price returns for United Kingdom listed firms between 2003 and 2007. Selvaggi and Upton also tested the strength and direction of any potential link between the two variables,

finding a robust casual relationship between good corporate governance and superior company performance.

In Korea, Black, Jang and Kim (2003) constructed a corporate governance index based on six subindices for: shareholder rights; board of directors; outside directors; audit committee and internal auditor; disclosure to investors; and ownership parity. They applied this to 526 companies in response to a 2001 Korea Stock Exchange survey of all listed companies. They found that significantly better corporate governance ratings were linked to higher firm value (measured by Tobin's Q), and higher security prices for Korea Stock Exchange firms.

In Switzerland, Beiner, Drobetz, Schmid and Zimmerman (2003) conducted research on corporate governance and firm valuation (measured by Tobin's Q), for Swiss firms in 2002, based on compliance with the recommendations implemented in the Swiss Code of Best Practice. This research used a broad index for corporate governance and variables related to ownership structure, board characteristics and leverage. Breiner et al. found that significantly better ratings of corporate governance were linked to higher firm valuation for Swiss listed firms.

In summary, we found that the majority of relevant literature suggests that companies with better corporate governance structures outperform companies with poorer corporate governance in a number of performance areas. This paper goes on to investigate whether such a relationship exists for Australian companies.

3. RECENT CORPORATE GOVERNANCE REFORMS IN AUSTRALIA

3.1 Corporate Law Economic Reform Program

The Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 (the CLERP 9 Act) legislated certain governance requirements for Australian companies. Amendments were made to the *Corporations Act 2001* in four key areas: executive remuneration; financial reporting; continuous disclosure; and shareholder participation (CLERP 9 2007). As stated in the explanatory memorandum to the CLERP 9 Bill, the objective underlying these amendments was to: 'improve the operation of the market by promoting transparency, accountability and shareholder activism' (page 1, paragraph 1.4).

A range of provisions designed to encourage shareholder participation and improve compliance with the continuous disclosure regime were also introduced. These amendments strengthened the continuous disclosure regime by imposing personal liability on individual responsibility for a failure to disclose; and also by giving ASIC the power to issue infringement notices (Clarke et al. 2007; CLERP 9 2002).

3.2 The ASX Corporate Governance Council's Principles of Good Corporate Governance and Best Practice Recommendations

The ASX has played a leading role in corporate governance since the formation of the ASX Corporate Governance Council in August 2002. In March 2003, the ASX Corporate Governance Council released ASX Corporate Governance Principles, identifying 10 core principles for effective corporate governance

along with 28 best practice guidelines.[3] The ASX Corporate Governance Principles are guidelines and are not intended to be prescriptive. A company has the flexibility not to adopt a principle if it considers that the principle is inappropriate in its particular circumstance. Under the ASX listing rules, companies are required to include a statement in their annual report 'disclosing the extent to which the entity has followed the best practice recommendations set by the ASX Corporate Governance Council during the reporting period'[4] and give reasons for any alternative approaches. In other words, 'if not, why not?' (ASX 2003).

The 'if not, why not?' approach to corporate governance is consistent with international best practice, with a number of other countries around the world taking similar approaches (International Monetary Fund 2005). The OECD Corporate Governance Principles, released in 2004, reinforced the benefits of the 'comply or explain' approach stating: '[p]olicy makers have a responsibility to put in place a framework that is flexible enough to meet the needs of corporations operating in widely different circumstances, facilitating their development of new opportunities to create value and to determine the most efficient deployment of resources' (OECD 2004, page 30).

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3 The Principles of Good Corporate Governance and Best Practice Recommendations were updated in 2007. As these revised principles came into effect from 1 January 2008 the principles referred to throughout this paper are the principles released in 2003.

4 ASX Listing Rule 4.10.3.

The ASX Corporate Governance Principles state that establishing the roles of management and the board with a balance of skills, experience and independence appropriate to the nature and extent of the company's operations is fundamental to any corporate governance structure. Additionally, integrity among those who can influence a company's strategy and financial performance, together with responsible and ethical decision-making are basic needs in any company (Principles 1, 2 and 3).

Meeting the information requirements of a modern investment community is vital in terms of accountability and attracting capital. Presenting a company's financial and non financial position requires processes that safeguard the integrity of company reporting, both internally and externally, providing a timely and balanced picture of all material matters. The rights of shareholders also need to be clearly recognised and maintained (Principles 4, 5 and 6).

Furthermore, every business decision has an element of uncertainty and carries risks that need to be managed through effective oversight and internal control. Keeping pace with the modern risks of business and other aspects of governance requires formal mechanisms that encourage enhanced board and management effectiveness (Principles 7 and 8).

Competitive remuneration packages are one key mechanism by which companies attract board members and managers with the skills required to achieve the performance expected by shareholders. The impact of company actions and decisions has become increasingly diverse and good corporate governance should recognise the legitimate interests of all stakeholders

(Principles 9 and 10). The following is a list of the 10 core principles for effective corporate governance:[5]

1. Lay solid foundations for management and oversight. Recognise and publish the respective roles and responsibilities of board and management.

2. Structure the board to add value. Have a board of an effective composition, size and commitment to adequately discharge its responsibilities and duties.

3. Actively promote ethical and responsible decision-making.

4. Safeguard integrity in financial reporting. Have a structure to independently verify and safeguard the integrity of the company's financial reporting.

5. Promote timely and balanced disclosure of all material matters concerning the company.

6. Respect the rights of shareholders and facilitate the effective exercise of those rights.

7. Establish a sound system of risk oversight and management and internal control.

8. Fairly review and actively encourage enhanced board and management effectiveness.

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5 A breakdown of the full 28 best practice guidelines is provided in Appendix B.

9. Ensure that the level and composition of remuneration is sufficient and reasonable and that its relationship to corporate and individual performance is defined.

10. Recognise legal and other obligations to all legitimate stakeholders.

Both the CLERP 9 amendments and the introduction of the ASX Corporate Governance Principles were designed to increase the amount of information companies were to provide to their investors and the public. Both approaches were based on flexible regulation, designed to leave a majority of the enforcement to the market (Clarke et al. 2007).

4. DATA AND METHODOLOGY

Our main source of information regarding corporate governance was company annual reports. As every listed company is required to report the extent to which they complied with the ASX Corporate Governance Principles in their annual reports, information about corporate governance was readily accessible. As the ASX Corporate Governance Principles only commenced in 2003, with 2004 being the first effective reporting year, our analysis of corporate governance was conducted on the ASX 300 companies between the years 2004 to 2006.[6]

6 In total, 304 companies were included in our analysis. In our preliminary analysis we performed Chow tests of whether the coefficients were the same in each year (except time dummies). This was rejected in the majority of cases so we proceeded with separate analysis by year.

We conducted testing in three key performance areas: shareholder returns, using earnings per share (EPS); operating performance, using return on assets (ROA); and one-year sales growth. With respect to the data relating to financial performance, we supplemented the information obtained from annual reports with information gathered from Aspect Huntley's FinAnalysis, a database of Australian listed companies' financial history and analysis.

We controlled for the size (market capitalisation), industry (2-digit Global Industry Classification Standard codes) and age of each company (number of years listed on the ASX). We also included capital expenditure (capex), foreign ownership and leverage as control variables.[7]

For every governance principle, each company received a 1 if it complied with the principle or a 0 if it did not. Table 4.1 shows the percentage of companies compliant with each of the individual best practice guidelines in 2004, 2005 and 2006. Table 4.1 shows that compliance with each of the 28 best practice guidelines is very high and improving over time. On average, companies were compliant with over 25 out of the 28 guidelines in each of the three years.

As we can see from Table 4.1, in 2004, 2005 and 2006, 30 per cent, 36 per cent and 37 per cent of companies respectively were fully compliant with the guidelines. The high level of compliance made testing any relationship with the individual best practice guidelines difficult. As a result, we decided to conduct our testing at the 10 core principles level. A company was compliant with the principle if it had complied with each of the guidelines contained within the core principle. For example, a company was compliant with Principle 2 if it complied with 2.1,

7 A full list of variables, and their definitions, is included in Appendix A.

2.2, 2.3, 2.4 and 2.5. If the company was not compliant with any of the five guidelines, it was considered not compliant with the core principle.

Table 4.1 — Compliance with 28 best practice guidelines

	2004	2005	2006
Guideline 1.1	99%	99.7%	99.7%
Guideline 2.1	61%	65%	67%
Guideline 2.2	67%	69%	71%
Guideline 2.3	92%	92%	94%
Guideline 2.4	67%	71%	72%
Guideline 2.5	95%	97%	97%
Guideline 3.1	92%	96%	96%
Guideline 3.2	94%	95%	96%
Guideline 3.3	94%	95%	95%
Guideline 4.1	96%	97%	97%
Guideline 4.2	97%	98%	98%
Guideline 4.3	70%	80%	85%
Guideline 4.4	96%	97%	98%
Guideline 4.5	97%	98%	98%
Guideline 5.1	95%	97%	98%
Guideline 5.2	94%	96%	96%
Guideline 6.1	95%	97%	97%
Guideline 6.2	94%	96%	96%
Guideline 7.1	96%	97%	97%
Guideline 7.2	92%	95%	95%
Guideline 7.3	96%	98%	98%
Guideline 8.1	89%	92%	92%
Guideline 9.1	95%	97%	97%
Guideline 9.2	80%	84%	84%
Guideline 9.3	95%	96%	96%
Guideline 9.4	92%	93%	93%
Guideline 9.5	96%	97%	97%
Guideline 10.1	92%	95%	95%
Number of companies fully compliant with 28 guidelines	92	108	113
Average compliance with 28 guidelines (out of 28)	25.22	25.81	25.94
Minimum number of guidelines complied with by any company	1	6	6
Maximum number of guidelines complied with by any company	28	28	28
Standard Deviation	3.71	3.02	2.97
Number of companies	304	304	304

Table 4.2 shows the percentage of companies compliant with each of the 10 core principles in 2004, 2005 and 2006. On average, over each of the three years companies were compliant with more than 8 out of the 10 core principles. As

you can see, with the exception of Principles 2, 4 and 9, compliance at the 10 principle level was still very high. As such, when we regressed the individual principles, we looked specifically for relationships associated with principles two, four and nine.

Table 4.2 — Compliance with the 10 core principles

	2004	2005	2006
Principle 1	99%	99.7%	99.7%
Principle 2	40%	45%	46%
Principle 3	90%	93%	93%
Principle 4r	69%	78%	83%
Principle 5	93%	95%	96%
Principle 6	93%	94%	95%
Principle 7n	89%	92%	92%
Principle 8	89%	92%	92%
Principle 9	72%	76%	77%
Principle 10	92%	95%	95%
Number of companies fully compliant with 10 principles	92	108	113
Average compliance with 10 principles	8.28	8.61	8.7
Minimum number of principles complied with by any company	0	1	1
Maximum number of principles complied with by any company	10	10	10
Standard deviation	1.93	1.68	1.61
Number of companies	304	304	304

4.1 Governance score and rank

A measure of corporate governance was created by adding one point for each of the principles a company was compliant with, giving each company its own corporate governance score. Following the creation of our corporate governance measure, we proceeded to rank each company high, medium, or low. The ranking was based on the corporate governance score (out of 28) the company received. Companies were ranked high if they complied with all 28 principles,

medium if they scored between 25 to 27 and low if they scored below 25. Table 4.3 shows a summary of company rankings.[8]

Table 4.3 Number of companies ranked high, medium and low

	2004			2005			2006		
	Rank high	Rank medium	Rank low	Rank high	Rank medium	Rank low	Rank high	Rank medium	Rank low
Number of companies	92	130	82	108	130	66	113	134	57

4.2 Grouped principles

Following our analysis of the individual guidelines and core principles, we conducted analysis based on grouped principles. Each of the 28 guidelines was categorised into one of three groups depending on whether it was structural, behavioural or disclosure related. This approach gave us an opportunity to determine which area in corporate governance, if any, companies should focus their efforts. These groups were based around Grant Fleming's analysis in his paper Corporate Governance in Australia (2003). Each principle was placed in only one group.

4.2.1 Group 1 — Structural principles

The structural principles assume that corporate governance mechanisms matter for the performance of the company and the achievement of the company's goals. These principles determine: the ideal composition of the board of

8 Regressions were run at both the 28 guideline and 10 principle level. The measure of corporate governance at the 10 principle level was created in the same with scores ranging from 0 to 10. At the 10 principle level, companies were ranked in the same way. Companies were ranked high if company fully compliant, ranked medium if company compliant with 9 out of the 10 and ranked low if compliant with 8 or less. The results obtained did not significantly differ in any way. As such, only the results at the 28 level

directors; the separation of roles on the board for the existence and structure of board committees; and the operation of annual general meetings (Fleming 2003).[9]

4.2.2 Group 2 — Behavioural principles

While the structure of a company influences the framework for decision-making, it does not necessarily lead to better governance on its own. It will also depend on how well the implementation of these principles influences behaviour (Fleming 2003). Group 2 contains the majority of the ASX guidelines and assumes that adherence to structure in itself does not necessarily lead to better governance. This group of principles is designed to influence the behaviour of the management of major listed firms. These principles relate to the relative roles of the board and executives, codes of conduct and charters, the necessity for sign-off of financial accounts and risk management policies, and the development of remuneration policies (Fleming 2003).[10]

4.2.3 Group 3 — Disclosure principles

Consistent with the continuous disclosure rules adopted in 1996, this group of principles assumes that more information is always better than less information, and that efficient market operations require information to be disclosed in a 'timely fashion'. Each of the ASX Corporate Governance Principles has an associated disclosure element to it, outlining how the firm is to communicate corporate governance information to the market. Further disclosure is required

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are included in the body of this paper. Results at the 10 principle level are included in Appendix C.

9 Structural principles include 2.1, 2.2, 2.3, 2.4, 4.2, 4.3, 6.1, 6.2 and 9.2.

10 Behavioural principles include 1.1, 3.1, 3.2, 4.1, 4.4, 5.1, 7.1, 7.2, 9.3, 9.4 and 10.1.

on the process of evaluating the board and senior executives and remuneration details (Fleming 2003).[11]

Table 4.4 shows the average compliance of companies to the principles contained in each group in 2004, 2005 and 2006. In 2004, on average, companies were compliant with 7.25 out of 9 of the structural principles (81 per cent), 10.4 out of 11 of the behavioural principles (95 per cent) and 7.57 out of 8 of the disclosure principles (95 per cent). In 2005, on average, companies were compliant with 7.52 out of 9 of the structural principles (84 per cent), 10.58 out of 11 of the behavioural principles (96 per cent) and 7.7 out of 8 of the disclosure principles (96 per cent). In 2006, on average, companies were compliant with 7.64 out of 9 of the structural principles (85 per cent), 10.61 out of 11 of the behavioural principles (96 per cent) and 7.7 out of 8 of the disclosure principles (96 per cent).

Table 4.4 — Compliance with grouped principles (averages)

	2004	2005	2006
Group 1 — Structural (contains 9 principles)	7.25	7.52	7.64
Group 2 — Behavioural (contains 11 principles)	10.4	10.58	10.61
Group 3 — Disclosure (contains 8 principles)	7.57	7.7	7.7

Table 4.4 shows that compliance with the behavioural and disclosure related principles is again quite high, while compliance with the structural principles is slightly lower. When we conduct our regressions, as stated previously with the individual principles, we will look for any significant results associated with Group 1, as this is the group showing the lowest compliance and most likely to show significant results.

11 Disclosure principles include 2.5, 3.3, 4.5, 5.2, 7.3, 8.1, 9.1 and 9.5.

4.3 Econometric approach

We ran four estimations for each of the dependent variables in each of the three years. 'Ri,t' represented the dependent variable (either EPS, ROA or sales growth) at time period 't' for each company 'i'.[12]

(1) $R_{i,t} = constant_t + \beta_{1t}*score_{i,t} + \beta_{2t}*size_{i,t} + \beta_{3t}*age_{i,t} + \beta_{4t}*foreign_{i,t} + \beta_{5t}*leverage_{i,t} + \beta_{6t}*capex_{i,t} + \beta_{7t}*industry_{i,t} + residual_{i,t}$

(2) $R_{i,t} = constant_t + \beta_{1t}*rankhigh_{i,t} + \beta_{2t}*rankmedium_{i,t} + \beta_{3t}*size_{i,t} + \beta_{4t}*age_{i,t} + \beta_{5t}*foreign_{i,t} + \beta_{6t}*leverage_{i,t} + \beta_{7t}*capex_{i,t} + \beta_{8t}*industry_{i,t} + residual_{i,t}$

(3) $R_{i,t} = constant_t + \beta_{1t}*principle1_{i,t} + \beta_{2t}*principle2_{i,t} + \beta_{3t}*principle3_{i,t} + \beta_{4t}*principle4_{i,t} + \beta_{5t}*principle5_{i,t} + \beta_{6t}*principle6_{i,t} + \beta_{7t}*principle7_{i,t} + \beta_{8t}*principle8_{i,t} + \beta_{9t}*principle9_{i,t} + \beta_{10t}*principle10_{i,t} + \beta_{11t}*size_{i,t} + \beta_{12t}*age_{i,t} + \beta_{13t}*foreign_{i,t} + \beta_{14t}*leverage_{i,t} + \beta_{15t}*capex_{i,t} + \beta_{16t}*industry_{i,t} + residual_{i,t}$

(4) $R_{i,t} = constant_t + \beta_{1t}*structural_{i,t} + \beta_{2t}*behavioural_{i,t} + \beta_{3t}*disclosure_{i,t} + \beta_{4t}*size_{i,t} + \beta_{5t}*age_{i,t} + \beta_{6t}*foreign_{i,t} + \beta_{7t}*leverage_{i,t} + \beta_{8t}*capex_{i,t} + \beta_{9t}*industry_{i,t} + residual_{i,t}$

Including 'rank high' and 'rank medium' together in estimation (2) allowed us to estimate the difference relative to 'rank low', the omitted category. Our results will give us the difference in 'rank high' relative to 'rank low' and 'rank medium' relative to 'rank low', allowing us to determine which group performed better.

12 We tested whether we could pool the three years together and pooling was rejected in the majority of cases. As such, we have included the results of regressions run for each individual year.

5. RESULTS

Our results are based on regressions by year and performance measure, containing all indicators and control variables. We examine the relationship between corporate governance in three key performance areas: shareholder returns (EPS); operating performance (ROA); and one-year sales growth (measured as a per cent). We discuss these in turn.

5.1 Corporate governance and shareholder returns (EPS)

Table 5.1 below shows the results of estimations (1) to (4) for corporate governance and EPS. As is evident from Table 5.1, EPS is positively related to corporate governance in all three years. An improvement in corporate governance of one percentage point is associated with an increase in EPS by 1.34 per cent in 2004, 1.54 per cent in 2005 and 2.36 per cent in 2006. These results indicate that those companies with better corporate governance scores performed better in the area of shareholder returns. With the exception of 2005, these results are statistically significant.

Table 5.1 also shows how high and medium ranked companies in corporate governance performed relative to low ranked companies, the omitted category. These results show that EPS is positively related to corporate governance in all three years. Both 'rank high' and 'rank medium' are positive, indicating that both of these groups outperformed companies that were ranked low in the area of corporate governance. Furthermore, those companies that were fully compliant with the principles, ('rank high'), outperformed those companies ranked medium and were significant over all three years. Companies fully compliant with the principles earned 15.13 per cent, 13.73 per cent and

23.49 per cent greater returns than low ranked companies in 2004, 2005 and 2006 respectively.

As discussed in the previous chapter, due to the high rates of compliance with the individual ASX Corporate Governance Principles, we looked specifically at those principles that had a lower level of compliance, namely Principles 2, 4 and 9. Our results show that EPS is positively correlated with Principles 2 and 4 over all three years. In regards to Principle 2, an improvement in the level of corporate governance is associated with an increase in EPS by 13.73 per cent, 12.57 per cent and 13.34 per cent in 2004, 2005 and 2006 respectively. Additionally, these results are statistically significant. In regards to Principle 4, an improvement in the level of corporate governance is associated with an increase in EPS by 3.41 per cent, 3.20 per cent and 9.54 per cent in 2004, 2005 and 2006 respectively. In contrast, EPS is negatively correlated with Principle 9. Table 5.3 shows that an increase in corporate governance compliance is associated with a fall in EPS by 2.16 per cent, 3.25 per cent and 4.47 per cent in 2004, 2005 and 2006 respectively. Our results for Principles 4 and 9, however, are not significant.

From Table 5.1 we can see that EPS is positively correlated with the structural and behavioural principles, but is negatively correlated with the disclosure principles. In regards to Group 1, an improvement in the level of corporate governance is associated with an increase in EPS by 3.13 per cent, 2.87 per cent and 4.35 per cent in 2004, 2005 and 2006 respectively. For Group 2, an improvement in corporate governance is associated with an increase in EPS by 3.45 per cent, 2.22 per cent and 9.24 per cent in 2004, 2005 and 2006 respectively. However, for Group 3, an improvement in corporate governance is associated with a fall in EPS by 2.07 per cent, 0.91 per cent and 5.98 per cent in 2004, 2005

and 2006 respectively. As mentioned in the previous chapter, compliance was quite high with respect to the principles contained in Groups 2 and 3. As such, Group 1 was most likely to return the most significant results. The results obtained for the structural group are significant in both 2004 and 2006.

In summary, we found that people who invested in companies that were more compliant with the ASX corporate governance principles would have earned greater returns on their investments over the sample period.

Table 5.1 Corporate governance score and EPS

		2004	2005	2006
Summary Stats	**Mean**	29.04	35.6	41.29
	Standard deviation	44.35	62.4	70.87
	Minimum	-81.3	-80.65	-153.65
	Maximum	262.61	519.42	702.14
	Number of companies	304	304	304
Estimation (1)	**Score**	1.34**	1.54	2.36**
		(0.58)	(0.98)	(1.05)
Estimation (2)	**Rank high**	15.13***	13.73*	23.49***
		(5.71)	(8.24)	(8.98)
	Rank medium	4.61	6.97	12.21
		(5.12)	(7.70)	(8.57)
Estimation (3)	**Principle 1**	6.17	19.54	13.31
		(22.14)	(52.67)	(55.29)
	Principle 2	13.73***	12.57*	13.34*
		(4.92)	(6.82)	(6.98)
	Principle 3	-0.17	-6.64	-3.98
		(14.44)	(22.08)	(25.86)
	Principle 4	3.41	3.20	9.54
		(5.24)	(8.19)	(9.37)
	Principle 5	0.07	-1.69	34.92
		(11.49)	(19.45)	(22.65)
	Principle 6	0.88	-2.44	-15.09
		(10.72)	(17.31)	(19.13)
	Principle 7	9.96	10.04	9.64
		(10.68)	(15.83)	(16.00)
	Principle 8	0.80	-0.77	9.18
		(7.81)	(12.62)	(13.66)
	Principle 9	-2.16	-3.25	-4.47
		(5.18)	(7.66)	(8.01)
	Principle 10	-7.01	5.72	-15.95
		(14.87)	(24.89)	(27.12)
Estimation (4)	**Group 1 — Structural**	3.13**	2.87	4.35*
		(1.38)	(1.99)	(2.25)
	Group 2 — Behavioural	3.45	2.22	9.24
		(3.19)	(5.23)	(5.67)
	Group 3 — Disclosure	-2.07	-0.91	-5.98
		(2.28)	(4.12)	(4.57)

Note: Full results can be found in Tables A1-A4 in Appendix C. The numbers contained in the table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. Controls include age, foreign owned, market capitalisation, leverage, capital expenditure and industry.

5.2 Corporate governance and operating performance (ROA)

Table 5.2 shows the results of estimations (1) to (4) for corporate governance and ROA.[13] Our results illustrate that ROA is positively correlated with corporate governance in all three years. An improvement in a company's corporate governance score by one percentage point is associated with an increase in operating performance by 0.37 per cent in 2004, 0.42 per cent in 2005 and 0.50 per cent in 2006. These results are statistically significant in all three years.

Table 5.2 also shows how high and medium ranked companies in corporate governance performed relative to low ranked companies, the omitted category. Both 'rank high' and 'rank medium' are positive, indicating that companies with better corporate governance outperformed companies that were ranked low for corporate governance. Furthermore, as was the case with EPS, companies that were fully compliant with the principles, ('rank high'), outperformed medium ranked companies. The results of companies that were fully compliant are also significant in all three years. Companies fully compliant with the ASX Corporate Governance Principles earned 3.73 per cent, 3.2 per cent and 3.14 per cent greater returns on assets than low ranked companies in 2004, 2005 and 2006 respectively.

With the exception of Principle 2 in 2004, our results show that ROA is positively correlated with Principles 2, 4 and 9. With respect to Principle 2, an improvement in the level of corporate governance is associated with a fall in ROA of 0.13 per cent in 2004 and an increase in ROA by 0.62 per cent and 1.51 per cent in 2005 and 2006 respectively. These results are not significant.

13 We removed outliers from our regressions. Two companies were removed in 2004, five companies were removed in 2005 and eight companies were removed in 2006.

In regards to Principle 4, an improvement in the level of corporate governance is associated with an increase in ROA by 3.03 per cent, 0.34 per cent and 3.94 per cent in 2004, 2005 and 2006 respectively. These results are significant in 2004 and 2006. For Principle 9, our results show that an improvement in corporate governance was associated with an increase in ROA by 2.91 per cent in 2004, 2.80 per cent in 2005 and 0.13 per cent in 2006. These results are significant in 2004 and 2005.

Some interesting results appear for a number of the individual principles. For example, the coefficients for Principle 1 in 2004 and 2005, and Principle 5 in 2004, are quite large, significant but with different signs. These results are likely to be due to multicollinearity and the high level of compliance associated with the principles.[14] Additionally, there may be outliers remaining in the analysis distorting the results. As such, we do not place great credibility in the results for these principles, even though they are significant.

Our results also show that ROA is positively correlated with the principles contained within the structural group in all three years. A rise in compliance with the principles contained in Group 1 is associated with an increase in ROA by 1.00 per cent in 2004, 0.90 per cent in 2005 and 0.91 per cent in 2006. These results are significant over all three years. In regards to Group 2, our results are positive in 2005, but negative in both 2004 and 2006. An improvement in compliance with the principles contained in Group 2 is associated with a fall in

14 Multicollinearity occurs when two or more variables in a regression are highly correlated. This can cause an issue as it can cause: small changes in the data to produce wide variations in parameter estimates; coefficients to have high standard errors and low significance level; and, coefficients to have the 'wrong' sign or implausible magnitudes (Greene 2007).

ROA of 0.28 per cent in 2004, an increase in ROA of 0.11 per cent in 2005, and a fall in ROA of 0.89 per cent in 2006. The results are also mixed with respect to Group 3. An improvement in compliance with the principles contained in Group 3 is associated with an increase in ROA by 0.31 per cent in 2004, a fall of 0.08 per cent in 2005 and an increase of 1.51 per cent in 2006. As with EPS, none of these results are significant.

Our results show that companies that are more compliant with the corporate governance principles, at an aggregate level, had greater operating performance than companies that were less compliant with the principles.

Table 5.2 Corporate Governance Score and ROA

		2004	2005	2006
Summary statistics	**Mean**	6.11	6.98	7.73
	Standard deviation	11.34	10.88	10.10
	Minimum	-45.55	-45.46	-38.94
	Maximum	47.69	55.25	42.10
	Number of companies	302	299	296
Estimation (1)	**Score**	0.37**	0.42**	0.50***
		(0.18)	(0.21)	(0.19)
Estimation (2)	**Rank high**	3.73**	3.20*	3.14*
		(1.81)	(1.78)	(1.66)
	Rank medium	3.25**	2.23	1.21
		(1.63)	(1.66)	(1.59)
Estimation (3)	**Principle 1**	15.45**	47.08***	5.12
		(6.84)	(10.90)	(10.10)
	Principle 2	-0.13	0.62	1.51
		(1.52)	(1.43)	(1.28)
	Principle 3	3.96	4.38	5.85
		(4.46)	(4.56)	(4.70)
	Principle 4	3.03*	0.34	3.94**
		(1.63)	(1.70)	(1.72)
	Principle 5	-10.42***	-2.75	2.07
		(3.55)	(4.02)	(4.13)
	Principle 6	5.87*	4.55	0.03
		(3.31)	(3.57)	(3.48)
	Principle 7	-3.66	-3.79	-2.96
		(3.30)	(3.27)	(2.91)
	Principle 8	0.64	0.65	0.73
		(2.46)	(2.60)	(2.48)
	Principle 9	2.91*	2.80*	0.13
		(1.61)	(1.58)	(1.49)
	Principle 10	-0.11	-2.36	-4.85
		(4.59)	(5.14)	(4.95)
Estimation (4)	**Group 1 — Structural**	1**	0.90**	0.91**
		(0.44)	(0.43)	(0.42)
	Group 2 — Behavioural	-0.28	0.11	-0.89
		(0.72)	(0.88)	(0.84)
	Group 3 — Disclosure	0.31	-0.08	1.51
		(1.01)	(1.12)	(1.04)

Note: Full results can be found in Tables A5-A8 in Appendix C. The numbers contained in the table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. Controls include age, foreign owned, market capitalisation, leverage, capital expenditure and industry.

5.3 Corporate governance and one-year sales growth

Table 5.3 shows the results of estimations (1) to (4) for corporate governance and one-year sales growth.[15] As is evident from Table 5.3, our results are negatively correlated with corporate governance in 2004, become positively related in 2005 and remain so in 2006. In 2004, an improvement in corporate governance is associated with a fall in sales growth of 12.75 per cent, an increase in sales growth in 2005 by 0.46 per cent and an increase in sales growth in 2006 by 4.28 per cent. These results are significant in 2004 and 2006.

Table 5.3 also shows how high and medium ranked companies in corporate governance performed relative to low ranked companies, the omitted category. Sales growth is negatively correlated with corporate governance in 2004, but is positively correlated with corporate governance by 2006. This is true for companies ranked high and medium. Furthermore, as was the case with EPS and ROA, those companies that were fully compliant with the principles, ('rank high'), outperformed companies ranked medium. These results are also significant at the 1 per cent level in 2006. In 2006, companies fully compliant with the principles had sales growth 28.95 per cent higher than those companies ranked low, and companies ranked medium had sales growth 24.71 per cent higher than companies ranked low.

Our results for principles two and nine align with our previous results. Sales growth and corporate governance are negatively correlated in 2004, but by 2006 are positively correlated. In regards to Principle 2, an improvement in corporate governance is associated with a fall in sales growth by 36.01 per cent in 2004,

15 We removed outliers from our regressions. In 2004 two companies were removed, in 2005 five companies were removed and in 2006 eight companies were removed.

and an increase in sales growth by 0.18 per cent and 5.31 per cent in 2005 and 2006 respectively. With respect to Principle 4, an improvement in corporate governance is associated with an increase in sales growth by 16.91 per cent in 2004. However, in 2005 and 2006 an improvement in corporate governance is associated with a fall in sales growth by 10.68 per cent and 5.67 per cent respectively. With respect to Principle 9, an improvement in corporate governance is associated with a fall in sales growth by 46.5 per cent and 3.71 per cent in 2004 and 2005, but an increase in sales growth by 19.38 per cent in 2006. Other than Principle 9 in 2006, none of these results are significant.

A similar pattern emerges for our grouped principles. For Group 1, an improvement in corporate governance is associated with a fall in sales growth by 8.54 per cent in 2004 and 3.39 per cent in 2005. However, an improvement in corporate governance is associated with an increase in sales growth of 4.25 per cent in 2006. These results are not significant over the sample period. For Group 2, an improvement in corporate governance is associated with an increase in sales growth by 45.20 per cent in 2004, a fall in sales growth by 1.14 per cent in 2005 and an increase in sales growth by 7.06 per cent in 2006. These results are significant in 2005. Finally for Group 3, our results begin negative in 2004, but are positive in 2005 and in 2006. An improvement in corporate governance rating in 2004 is associated with a fall in sales growth by 104.80 per cent, an increase in sales growth by 10.09 per cent in 2005 and 0.78 per cent in 2006. These results are significant in 2004.

Table 5.3 Corporate governance and one-year sales growth

		2004	2005	2006
Summary Statistics	**Mean**	71.25	31.43	21.35
	Standard deviation	329.29	83.68	61.07
	Minimum	-100	-100	-100
	Maximum	3748.96	564.33	348.27
	Number of companies	302	299	296
Estimation (1)	**Score**	-12.75***	0.46	4.28***
		(5.40)	(1.69)	(1.32)
Estimation (2)	**Rank high**	-64.30	-6.03	28.95***
		(54.73)	(14.23)	(10.64)
	Rank medium	-31.28	-19.02	24.71***
		(49.82)	(13.36)	(10.27)
Estimation (3)	**Principle 1**	284.69	29.00	40.15
		(201.37)	(87.85)	(63.43)
	Principle 2	-36.01	0.18	5.31
		(45.66)	(11.68)	(8.21)
	Principle 3	172.16	-3.42	7.28
		(132.05)	(36.75)	(29.76)
	Principle 4	16.91	-10.68	-5.67
		(49.63)	(13.92)	(11.12)
	Principle 5	-9.74	60.28*	18.03
		(112.67)	(33.44)	(26.51)
	Principle 6	-49.23	-21.41	-5.84
		(110.46)	(30.17)	(22.26)
	Principle 7	-71.55	-29.44	24.34
		(108.51)	(26.46)	(18.92)
	Principle 8	-264.21***	42.26**	-3.62
		(72.82)	(21.21)	(16.34)
	Principle 9	-46.50	-3.71	19.38**
		(49.29)	(13.04)	(9.70)
	Principle 10	12.49	15.54	5.89
		(138.09)	(42.48)	(32.05)
Estimation (4)	**Group 1 — Structural**	-8.54	-3.39	4.25
		(13.05)	(3.46)	(2.76)
	Group 2 — Behavioural	45.20**	-1.14	7.06
		(21.06)	(6.98)	(5.30)
	Group 3 — Disclosure	-104.80***	10.09	0.78
		(29.74)	(8.97)	(6.78)

Note: Full results can be found in Tables A9-A12 in Appendix C. The numbers contained in the table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. Controls include age, foreign owned, market capitalisation, leverage, capital expenditure and industry.

As with our results for corporate governance and ROA, some interesting results appear for a number of the principles. Principles one, three and eight in 2004 are again quite large, in the case of Principle 8, significant, but with different signs. Furthermore, Groups 2 and 3 in 2004 are large, significant, but again with

different signs. We believe these results are also due to the high level of compliance with these principles and the resultant multicollinearity. As previously stated, we do not place great credibility in the results for these principles even though they appear to be significant.

These results are quite consistent, in that, at the aggregate level, our findings show a negative relationship between sales growth and the corporate governance rating in 2004; however, by 2006 the relationship between sales growth and corporate governance is positive and significant. These results imply that those companies that were more compliant with the ASX Corporate Governance Principles have greater sales growth than those that were less compliant.

6. SUMMARY AND FURTHER RESEARCH

There is ongoing debate about the existence and nature of any relationship between good corporate governance and good financial performance. As supported by our literature review in section two, it is widely accepted that good governance processes can help to focus those in charge of a company on the purpose of their corporate activities and the direction of their business, enabling them to identify emerging problems early (Tirole 2006). While the systems and structures of a company may provide a setting conducive to good corporate governance, whether or not the objectives of a company are achieved ultimately lies in the acts of these people charged with the relevant responsibilities. If the objectives of corporate governance are to be achieved, an understanding that systems should be adapted to suit the specific traits and needs of each company is required (La Porta et al. 2002).

Corporate governance is not a 'one size fits all' concept. Even with companies within a defined category, the capital base, risk profile, corporate history, business activity and management, and personnel arrangements of a company will all be unique. It would not be practicable or desirable to attempt to place all companies within a single defined set of structures and processes. Corporate governance principles should have some degree of flexibility and evolve in the light of changing circumstances of a company. Governance practices should also develop in the framework of developments both within and across countries (ASX 2007).

Identifying the specific principles that contribute to the improved financial performance of Australian companies would further provide a useful focus for succeeding corporate governance research and practice, improving our understanding of relationships between corporate governance and financial performance. These provisions are the ones that would have potential relevance for policy-making (Bebchuk, Cohen and Ferrell 2005).

In this paper we tested corporate governance and company performance in three areas for the ASX 300, between the years 2004 to 2006, using the ASX Corporate Governance Council's Principles of Good Corporate Governance and Best Practice Recommendations. We created a measure of corporate governance, testing this against performance in EPS, ROA and one-year sales growth. We found that companies with better corporate governance outperformed those companies that were less compliant. In particular, companies that were fully compliant with the ASX Corporate Governance Principles significantly outperformed companies that were not in the areas of EPS and ROA over the sample period.

While each of the individual principles may be equally important in influencing the financial performance of a company, the high compliance of companies to a number of the principles made it difficult for us to test the presence of a relationship. Furthermore, data limitations did not allow us to draw any causal inferences from our findings, and as such, we make no assumptions about the direction of any potential relationships that we did find. Our results indicated that companies may find it useful to focus their efforts on improving corporate governance in the areas of board composition, remuneration, the formation of committees (that is, board, audit and remuneration committees), and those principles related to the structure of the company.

Our study focused on the association between corporate governance and financial performance for the top 300 companies in Australia. It would be worthwhile to conduct further research based on small or medium sized companies and compare the results. Furthermore, increasing the sample size, say from the top 300 Australian listed companies to the top 500 listed companies, may provide interesting results for comparison. It may also be interesting to continue to examine sales growth to see whether this relationship remains positive and significant into the future.

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APPENDIX A

DEFINITION OF VARIABLES

Return on assets (ROA) gives an indication of how profitable a company's assets are in generating revenue. ROA is a key measure of a company's profitability and shows how much profit a company is making on the assets used in its business (Aspect Huntley 2008).

Earnings per share (EPS) is an indicator of a company's profitability and represents the portion of a company's profits allocated to each outstanding share of common stock (Aspect Huntley 2008).

Sales growth is the increase in sales over a specific time period. We have used annual sales growth indicating the growth in sales from one year to the next.

Financial leverage represents the use of various financial instruments or borrowed capital to increase the potential return of an investment. It shows the amount of debt used to finance a firm's assets. Leverage helps investors and firms to invest or operate. Financial leverage magnifies both gains and losses as a company can use leverage to generate shareholder wealth, however, if it fails to do so, the interest expense and credit risk of default can destroy shareholder value (Aspect Huntley 2008).

Capital expenditures (capex) are expenditures creating future benefits and are incurred when a company spends money to either buy fixed assets or to add to the value of an existing fixed asset with a useful life that extends beyond the taxable year (Aspect Huntley 2008).

Market capitalisation is measured as the closing share price on the last day of the company's financial year multiplied by the number of outstanding shares at the end of the period. This is a measurement of the size of each company (Aspect Huntley 2008).

Firm age is also considered to potentially affect the valuation of a firm and is calculated as the number of years listed on the ASX.

Foreign ownership. This is a dummy variable with a value of 1 if the company is foreign owned and 0 if it is not.

Industry, based on ASX 2-digit Global Industry Classification Standard codes. There are 10 industries, each an individual dummy variable, with a 1 if the company is in that industry and 0 otherwise. The industries are energy, utilities, technology, information technology, financials, health care, consumer staples, consumer discretionary, industrials, and materials.

APPENDIX B

ASX CORPORATE GOVERNANCE COUNCIL PRINCIPLES OF GOOD CORPORATE GOVERNANCE AND BEST PRACTICE RECOMMENDATIONS

The full 28 best practice guidelines state that a company should:

1.1 Formalise and disclose the functions reserved to the board and those delegated to management.

2.1 A majority of the board should be independent directors.

2.2 The chairperson should be an independent director.

2.3 The roles of the chairperson and CEO should not be exercised by the same individual.

2.4 The board should establish a nomination committee.

2.5 Provide the information in *Guide to reporting on Principle 2*.

3.1 Establish a code of conduct to guide the directors, the CEO and the CFO and any other key executives as to:

3.1.1 the practices necessary to maintain confidence in the company's integrity,

3.1.2 the responsibility and accountability of individuals for reporting and investigating reports of unethical practices

3.2 Disclose the policy concerning trading in company securities by directors, officers and employees.

3.3 Provide the information indicated in *Guide to reporting on Principle 3*.

4.1 Require the CEO (or equivalent) and the CFO (or equivalent) to state in writing to the board that the company's financial reports present a true and fair view, in all material respects, of the company's financial condition and operational results and are in accordance with relevant accounting standards.

4.2 The board should establish an audit committee.

4.3 Structure the audit committee so that it consists of: only non-executive directors; a majority of independent directors; an independent chairperson, who is not chairperson of the board; at least three members.

4.4 The audit committee should have a formal charter.

4.5 Provide the information indicated in *Guide to reporting on Principle 4*.

5.1 Establish written policies and procedures designed to ensure compliance with ASX Listing Rule disclosure requirements and to ensure accountability at a senior management level for that compliance.

5.2 Provide the information indicated in *Guide to reporting on Principle 5*.

6.1 Design and disclose a communications strategy to promote effective communication with shareholders and encourage effective participation at general meetings.

6.2 Request the external auditor to attend the annual general meeting and be available to answer shareholder questions about the conduct of the audit and the preparation and context of the auditor's report.

7.1 The board or appropriate board committee should establish policies on risk oversight and management.

7.2 The CEO (or equivalent) and the CFO (or equivalent) should state to the board in writing that:

7.2.1 the statement given in accordance with best practice recommendation 4.1 (the integrity of financial statements) is founded on a sound system of risk management and internal compliance and control which implements the policies adopted by the board,

7.2.2 the company's risk management and internal compliance and control system is operating efficiently and effectively in all material respects.

7.3 Provide the information indicated in *Guide to reporting on Principle 7*.

8.1 Disclose the process for performance evaluation of the board, its committees and individual directors, and key executives.

9.1 Provide disclosure in relation to the company's remuneration policies to enable investors to understand: (i) the costs and benefits of those policies; and, (ii) the link between remuneration paid to directors and key executives and corporate performance.

9.2 The board should establish a remuneration committee.

9.3 Clearly distinguish the structure of non-executive directors' remuneration from that of executives.

9.4 Ensure that payment of equity-based executive remuneration is made in accordance with thresholds set in plans approved by shareholders.

9.5 Provide the information indicated in *Guide to reporting on Principle 9*.

10.1 Establish and disclose a code of conduct to guide compliance with legal and other obligations to legitimate stakeholders.

APPENDIX C

TABLES

Table A1 Corporate governance score and EPS

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Score	1.34**	1.54	2.36**	2.88***	2.68	4.71***
	(0.58)	(0.98)	(1.05)	(1.11)	(1.78)	(1.94)
Age	0.41***	0.57***	0.70***	0.40***	0.57***	0.69***
	(0.15)	(0.21)	(0.23)	(0.51)	(0.21)	(0.23)
Foreign	-14.78	-25.59**	-21.84	-15.32	-26.83**	-23.19*
	(9.47)	(13.03)	(13.98)	(9.38)	(12.98)	(13.91)
Market capitalisation	0.003***	0.003***	0.002***	0.003***	0.003***	0.002***
	(0)	(0)	(0)	(0)	(0)	(0)
Leverage	0.04***	0.03***	0.01*	0.04***	0.03***	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Capex	-0.02*	0	0.02***	-0.02*	0	0.02***
	(0.01)	(0)	(0.01)	(0.01)	(0)	(0.01)
Utilities	-25.36	-1.23	-10.35	-25.60	-1.81	-11.42
	(19.75)	(27.61)	(29.13)	(19.71)	(27.63)	(29.10)
Telecommunications	-46.88***	-65.84***	-79.44***	-45.32***	-64.67***	-77.85***
	(16.35)	(22.39)	(23.63)	(16.28)	(22.39)	(23.59)
Information technology	-22.98	-29.89	-15.49	-22.54	-30.02	-15.67
	(14.36)	(20.15)	(21.39)	(14.32)	(20.16)	(21.36)
Financials	-5.99	-3.18	23.31*	-5.28	-2.98	24.01*
	(8.85)	(12.26)	(13.16)	(8.83)	(12.27)	(13.15)
Health care	-10.96	-17.23	-8.68	-9.89	-16.88	-7.35
	(10.79)	(15.12)	(16.04)	(10.75)	(15.12)	(16.03)
Consumer staples	-1.05	-13.82	7.04	-0.86	-13.79	7.28
	(12.10)	(16.92)	(19.92)	(12.06)	(16.93)	(17.89)
Consumer discretionary	-12.10	-19.99	-8.54	-11.83	-20.18	-8.60
	(9.45)	(13.22)	(14.13)	(9.42)	(13.23)	(14.10)
Industrials	-11.88	-18.21	-2.39	-11.58	-18.32	-2.23
	(9.30)	(13.06)	(13.86)	(9.28)	(13.07)	(13.84)
Materials	-9.89	-19.49	-8.59	-8.75	-19.11	-7.81
	(9.03)	(12.70)	(13.43)	(9.01)	(12.71)	(13.42)
Constant	-14.94	-15.12	-47.06	-5.31	1.58	-26.97
	(16.37)	(27.61)	(30.04)	(12.21)	(19.08)	(21.12)

$EPS_{i,t} = constant_t + \beta_{1t}*score_{i,t} + \beta_{2t}*size_{i,t} + \beta_{3t}*age_{i,t} + \beta_{4t}*foreign_{i,t} + \beta_{5t}*leverage_{i,t} + \beta_{6t}*capex_{i,t} + \beta_{7t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A2 Corporate governance ranking and EPS

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Rank high	15.13***	13.73*	23.49***	12.87***	8.07	17.60**
	(5.71)	(8.24)	(8.98)	(5.12)	(7.23)	(7.67)
Rank medium	4.61	6.97	12.21	1.72	-2.17	5.64
	(5.12)	(7.70)	(8.57)	(5.38)	(7.47)	(7.90)
Age	0.39***	0.55***	0.67***	0.38***	0.55***	0.65***
	(0.15)	(0.22)	(0.23)	(0.15)	(0.22)	(0.23)
Foreign	-16.12*	-26.42**	-24.41*	-16.55*	-26.32**	-24.87*
	(9.34)	(13.00)	(13.90)	(9.35)	(13.04)	(13.93)
Market capitalisation	0.003***	0.003***	0.002***	0.003***	0.003***	0.002***
	(0)	(0)	(0)	(0)	(0)	(0)
Leverage	0.04***	0.03***	0.01	0.04***	0.03***	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Capex	-0.02**	0	0.02***	-0.02**	0	0.02***
	(0.01)	(0)	(0.01)	(0.01)	(0)	(0.01)
Utilities	-23.83	-2.38	-12.50	-23.05	0.18	-11.34
	(19.81)	(27.69)	(29.14)	(20.02)	(27.85)	(29.26)
Telecommunications	-43.95***	-63.74***	-77.27***	-43.81***	-63.19***	-76.03
	(16.29)	(22.42)	(23.66)	(16.38)	(22.50)	(23.71)
Information technology	-21.59	-28.48	-14.51	-21.31	-27.87	-15.17
	(14.33)	(20.18)	(21.35)	(14.35)	(20.29)	(21.41)
Financials	-5.35	-3.14	22.83*	-4.92	-2.14	24.59*
	(8.86)	(12.34)	(13.23)	(8.86)	(12.36)	(13.20)
Health care	-10.80	-17.89	-9.50	-10.31	-16.48	-8.62
	(10.78)	(15.16)	(16.03)	(10.78)	(15.27)	(16.05)
Consumer staples	-1.30	-14.20	5.48	-0.71	-12.24	6.88
	(12.10)	(16.98)	(17.94)	(12.12)	(17.09)	(17.96)
Consumer discretionary	-11.70	-20.36	-9.86	-11.18	-19.22	-8.42
	(9.47)	(13.27)	(14.18)	(9.48)	(13.35)	(14.17)
Industrials	-12.17	-19.65	-5.15	-11.56	-19.10	-4.03
	(9.34)	(13.09)	(13.88)	(9.35)	(13.14)	(13.89)
Materials	-9.81	-19.55	-9.11	-9.49	-19.44	-8.04
	(9.02)	(12.72)	(13.41)	(9.02)	(12.73)	(13.46)
Constant	12.90	17.56	2.18	17.79*	22.20*	7.10
	(8.82)	(12.95)	(13.94)	(8.54)	(12.34)	(13.41)

$EPS_{i,t} = constant_t + \beta_{1t}*rankhigh_{i,t} + \beta_{2t}*rankmedium_{i,t} + \beta_{3t}*size_{i,t} + \beta_{4t}*age_{i,t} + \beta_{5t}*foreign_{i,t} + \beta_{6t}*leverage_{i,t} + \beta_{7t}*capex_{i,t} + \beta_{8t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A3 Individual corporate governance principles and EPS

	2004	2005	2006
Principle 1	6.17	19.54	13.31
	(22.14)	(52.67)	(55.29)
Principle 2	13.73***	12.57*	13.34*
	(4.92)	(6.82)	(6.98)
Principle 3	-0.17	-6.64	-3.98
	(14.44)	(22.08)	(25.86)
Principle 4	3.41	3.20	9.54
	(5.24)	(8.19)	(9.37)
Principle 5	0.07	-1.69	34.92
	(11.49)	(19.45)	(22.65)
Principle 6	0.88	-2.44	-15.09
	(10.72)	(17.31)	(19.13)
Principle 7	9.96	10.04	9.64
	(10.68)	(15.83)	(16.00)
Principle 8	0.80	-0.77	9.18
	(7.81)	(12.62)	(13.66)
Principle 9	-2.16	-3.25	-4.47
	(5.18)	(7.66)	(8.01)
Principle 10	-7.01	5.72	-15.95
	(14.87)	(24.89)	(27.12)
Age	0.36***	0.56***	0.72***
	(0.15)	(0.22)	(0.23)
Foreign	-18.70*	-30.36**	-26.03*
	(9.63)	(13.33)	(14.26)
Market capitalisation	0.003***	0.003***	0.002***
	(0)	(0)	(0)
Leverage	0.04***	0.03***	0.01*
	(0.01)	(0.01)	(0.01)
Capex	-0.02**	0	0.02***
	(0.01)	(0)	(0.01)
Utilities	-22.11	-0.68	-9.12
	(19.93)	(28.03)	(29.29)
Telecommunications	-47.32***	-66.85***	-77.36***
	(16.42)	(22.83)	(23.81)
Information technology	-23.88	-30.18	-16.64
	(14.68)	(20.56)	(21.74)
Financials	-5.04	-2.89	24.08*
	(8.90)	(12.55)	(13.79)
Health care	-10.06	-17.42	-6.31
	(10.88)	(15.68)	(16.38)
Consumer staples	-0.11	-13.25	8.08
	(12.28)	(17.38)	(18.16)
Consumer discretionary	-11.08	-19.78	-6.55
	(9.53)	(13.43)	(14.23)
Industrials	-11.84	-19.80	-3.81
	(9.37)	(13.33)	(13.99)
Materials	-9.54	-20.29	-5.26
	(9.11)	(13.03)	(13.62)
Constant	3.78	-3.11	-28.60
	(23.25)	(56.68)	(59.66)

$EPS_{i,t} = constant_t + \beta_{1t}*principle1_{i,t} + \beta_{2t}*principle2_{i,t} + \beta_{3t}*principle3_{i,t} + \beta_{4t}*principle4_{i,t} + \beta_{5t}*principle5_{i,t} + \beta_{6t}*principle6_{i,t} + \beta_{7t}*principle7_{i,t} + \beta_{8t}*principle8_{i,t} + \beta_{9t}*principle9_{i,t} + \beta_{10t}*principle10_{i,t} + \beta_{11t}*size_{i,t} + \beta_{12t}*age_{i,t} + \beta_{13t}*foreign_{i,t} + \beta_{14t}*leverage_{i,t} + \beta_{15t}*capex_{i,t} + \beta_{16t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A4 Grouped corporate governance principles and EPS

	2004	2005	2006
Group 1 — Structural	3.13**	2.87	4.35*
	(1.38)	(1.99)	(2.25)
Group 2 — Behavioural	3.45	2.22	9.24
	(3.19)	(5.23)	(5.67)
Group 3 — Disclosure	-2.07	-0.91	-5.98
	(2.28)	(4.12)	(4.57)
Age	0.39***	0.56***	0.70***
	(0.15)	(0.21)	(0.23)
Foreign	-14.19	-25.05*	-19.03
	(9.50)	(13.27)	(14.20)
Market capitalisation	0.003***	0.003***	0.002***
	(0)	(0)	(0)
Leverage	0.04***	0.03***	0.01
	(0.01)	(0.01)	(0.01)
Capex	-0.02*	0	0.02***
	(0.01)	(0)	(0.01)
Utilities	-24.71	-1.20	-9.90
	(17.71)	(27.67)	(29.04)
Telecommunications	-47.47***	-66.42***	-79.69***
	(16.33)	(22.46)	(23.56)
Information technology	-23.21	-30.18	-16.67
	(16.34)	(20.20)	(21.33)
Financials	-5.61	-3.36	23.18*
	(8.85)	(12.30)	(13.15)
Health care	-11.71	-3.36	-11.32
	(10.77)	(12.30)	(16.05)
Consumer staples	-1.87	-18.40	4.87
	(12.09)	(15.22)	(17.92)
Consumer discretionary	-11.60	-19.78	-7.80
	(9.43)	(13.26)	(14.09)
Industrials	-12.25	-18.79	-4.12
	(9.29)	(13.12)	(13.85)
Materials	-9.98	-19.61	-7.87
	(9.01)	(12.73)	(13.40)
Constant	-7.37	-9.94	-26.02
	(17.65)	(30.90)	(33.48)

$EPS_{i,t} = constant_t + \beta_{1t}*structural_{i,t} + \beta_{2t}*behavioural_{i,t} + \beta_{3t}*disclosure_{i,t} + \beta_{4t}*size_{i,t} + \beta_{5t}*age_{i,t} + \beta_{6t}*foreign_{i,t} + \beta_{7t}*leverage_{i,t} + \beta_{8t}*capex_{i,t} + \beta_{9t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A5 Corporate governance score and ROA

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Score	0.37**	0.42**	0.50***	0.64*	0.67*	0.95***
	(0.18)	(0.21)	(0.19)	(0.35)	(0.38)	(0.36)
Age	-0.01	-0.03	-0.03	-0.02	-0.03	-0.03
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)
Foreign	-0.07	-2.54	-4.63*	-0.41	-2.90	-4.95*
	(2.98)	(2.80)	(2.61)	(2.97)	(2.79)	(2.60)
Market capitalisation	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Leverage	0	-0.005***	-0.006***	0	-0.005***	-0.006***
	(0)	(0)	(0)	(0)	(0)	(0)
Capex	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Utilities	-0.67	-0.04	-2.30	-0.60	-0.15	-2.51
	(6.22)	(5.92)	(5.29)	(6.23)	(5.93)	(5.29)
Telecommunications	-4.87	-3.53	-6.74	-4.37	-3.21	-6.40
	(5.15)	(4.80)	(4.30)	(5.15)	(4.81)	(4.29)
Information technology	3.70	-1.08	-0.14	3.87	-1.10	-0.16
	(4.52)	(4.32)	(3.89)	(4.53)	(4.33)	(3.89)
Financials	1.34	2.04	2.51	1.52	2.08	2.64
	(2.79)	(2.63)	(2.40)	(2.79)	(2.64)	(3.89)
Health care	-4.55	-3.99	-3.54	-4.26	-3.85	-3.24
	(3.43)	(3.32)	(3.02)	(3.43)	(3.36)	(3.02)
Consumer staples	0.05	-0.31	-0.65	0.22	-0.27	-0.57
	(3.81)	(3.63)	(3.26)	(3.81)	(3.63)	(3.25)
Consumer discretionary	3.73	4.36	2.77	3.84	4.31	2.77
	(2.97)	(2.84)	(2.58)	(2.98)	(2.84)	(2.58)
Industrials	1.05	2.14	0.58	1.15	2.10	0.62
	(2.93)	(2.81)	(2.53)	(2.93)	(2.81)	(2.53)
Materials	-2.54	0.45	1.01	-2.27	0.54	1.15
	(2.85)	(2.73)	(2.45)	(2.86)	(2.74)	(2.45)
Constant	-2.74	-3.26	-3.95	1.16	1.74	0.77
	(5.16)	(5.93)	(5.48)	(3.86)	(4.10)	(3.87)

$ROA_{i,t} = constant_t + \beta_{1t}*score_{i,t} + \beta_{2t}*size_{i,t} + \beta_{3t}*age_{i,t} + \beta_{4t}*foreign_{i,t} + \beta_{5t}*leverage_{i,t} + \beta_{6t}*capex_{i,t} + \beta_{7t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A6 Corporate governance ranking and ROA

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Rank high	3.73**	3.20*	3.14*	2.58	2.41	3.15**
	(1.81)	(1.78)	(1.66)	(1.62)	(1.56)	(1.42)
Rank medium	3.25**	2.23	1.21	2.42	1.59	1.77
	(1.63)	(1.66)	(1.59)	(1.70)	(1.62)	(1.46)
Age	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)
Foreign	-0.66	-2.85	-5.24**	-1.06	-3.08	-5.36**
	(2.95)	(2.79)	(2.62)	(2.96)	(2.81)	(2.62)
Market capitalisation	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Leverage	0	-0.01***	-0.01***	0	-0.01***	-0.01***
	(0)	(0)	(0)	(0)	(0)	(0)
Capex	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Utilities	-1.21	-0.34	-2.35	-1.43	-0.49	-2.63
	(6.25)	(5.95)	(5.34)	(6.33)	(5.99)	(5.34)
Telecommunications	-4.43	-3.05	-6.20	-4.71	-3.37	-6.26
	(5.14)	(4.82)	(4.34)	(5.18)	(4.84)	(4.33)
Information technology	3.81	-0.77	0.03	3.88	-1.17	-0.13
	(4.52)	(4.34)	(3.91)	(4.54)	(4.36)	(3.91)
Financials	1.14	1.90	2.49	1.33	1.95	2.64
	(2.80)	(2.65)	(2.43)	(2.80)	(2.66)	(2.41)
Health care	-4.84	-4.19	-3.63	-4.56	-4.29	-3.58
	(3.44)	(3.37)	(3.05)	(3.45)	(3.38)	(3.04)
Consumer staples	-0.20	-0.43	-0.63	-0.01	-0.49	-0.68
	(3.82)	(3.65)	(3.29)	(3.83)	(3.67)	(3.28)
Consumer discretionary	3.44	4.16	2.62	3.59	4.08	2.66
	(2.99)	(2.85)	(2.61)	(3)	(2.87)	(2.59)
Industrials	0.56	1.80	0.21	0.77	1.71	0.23
	(2.95)	(2.82)	(2.55)	(2.96)	(2.83)	(2.54)
Materials	-2.63	0.42	0.91	-2.43	0.42	1.11
	(2.85)	(2.74)	(2.47)	(2.86)	(2.74)	(2.47)
Constant	4.35	5.60	7.5***	5.50**	6.46***	7.56***
	(2.79)	(2.78)	(2.57)	(2.70)	(2.65)	(2.46)

$ROA_{i,t} = constant_t + \beta_{1t}*rankhigh_{i,t} + \beta_{2t}*rankmedium_{i,t} + \beta_{3t}*size_{i,t} + \beta_{4t}*age_{i,t} + \beta_{5t}*foreign_{i,t} + \beta_{6t}*leverage_{i,t} + \beta_{7t}*capex_{i,t} + \beta_{8t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A7 Individual corporate governance principles and ROA

	2004	2005	2006
Principle 1	15.45**	47.08***	5.12
	(6.84)	(10.90)	(10.10)
Principle 2	-0.13	0.62	1.51
	(1.52)	(1.43)	(1.28)
Principle 3	3.96	4.38	5.85
	(4.46)	(4.56)	(4.70)
Principle 4	3.03*	0.34	3.94**
	(1.63)	(1.70)	(1.72)
Principle 5	-10.42***	-2.75	2.07
	(3.55)	(4.02)	(4.13)
Principle 6	5.87*	4.55	0.03
	(3.31)	(3.57)	(3.48)
Principle 7	-3.66	-3.79	-2.96
	(3.30)	(3.27)	(2.91)
Principle 8	0.64	0.65	0.73
	(2.46)	(2.60)	(2.48)
Principle 9	2.91*	2.80*	0.13
	(1.61)	(1.58)	(1.49)
Principle 10	-0.11	-2.36	-4.85
	(4.59)	(5.14)	(4.95)
Age	-0.03	-0.03	-0.02
	(0.05)	(0.05)	(0.04)
Foreign	0.07	-2.33	-4.82*
	(2.97)	(2.75)	(2.67)
Market capitalisation	0	0	0
	(0)	(0)	(0)
Leverage	0	-0.01***	-0.01***
	(0)	(0)	(0)
Capex	0	0	0
	(0)	(0)	(0)
Utilities	-1.65	-0.46	-2.49
	(6.15)	(5.78)	(5.32)
Telecommunications	-3.40	-2.40	-5.79
	(5.07)	(4.71)	(4.33)
Information technology	3.48	-1.25	0.69
	(4.53)	(4.24)	(3.95)
Financials	1.71	2.33	2.60
	(2.75)	(2.59)	(2.42)
Health care	-4.15	-2.06	-3.18
	(3.40)	(3.35)	(3.10)
Consumer staples	-0.69	-0.40	-0.52
	(3.79)	(3.59)	(3.30)
Consumer discretionary	3.76	4.14	2.95
	(2.94)	(2.77)	(2.60)
Industrials	1.40	2.21	0.69
	(2.89)	(2.76)	(2.55)
Materials	-1.99	0.43	1.46
	(2.82)	(2.70)	(2.49)
Constant	-9.19	-42.67***	-1.25
	(7.18)	(11.74)	(10.91)

$ROA_{i,t} = constant_t + \beta_{1t}*principle1_{i,t} + \beta_{2t}*principle2_{i,t} + \beta_{3t}*principle3_{i,t} + \beta_{4t}*principle4_{i,t} + \beta_{5t}*principle5_{i,t} + \beta_{6t}*principle6_{i,t} + \beta_{7t}*principle7_{i,t} + \beta_{8t}*principle8_{i,t} + \beta_{9t}*principle9_{i,t} + \beta_{10t}*principle10_{i,t} + \beta_{11t}*size_{i,t} + \beta_{12t}*age_{i,t} + \beta_{13t}*foreign_{i,t} + \beta_{14t}*leverage_{i,t} + \beta_{15t}*capex_{i,t} + \beta_{16t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A8 Grouped corporate governance principles and ROA

	2004	2005	2006
Group 1 — Structural	1**	0.90**	0.91**
	(0.44)	(0.43)	(0.42)
Group 2 — Behavioural	-0.28	0.11	-0.89
	(0.72)	(0.88)	(0.84)
Group 3 — Disclosure	0.31	-0.08	1.51
	(1.01)	(1.12)	(1.04)
Age	-0.02	-0.03	-0.03
	(0.05)	(0.05)	(0.04)
Foreign	-0.09	-2.70	-4.25
	(3)	(2.84)	(2.66)
Market capitalisation	0	0	0
	(0)	(0)	(0)
Leverage	0	-0.01***	-0.01***
	(0)	(0)	(0)
Capex	0	0	0
	(0)	(0)	(0)
Utilities	-0.54	-0.08	-2.21
	(6.22)	(5.93)	(5.28)
Telecommunications	-5.16	-3.61	-6.77
	(5.15)	(4.81)	(4.29)
Information technology	3.55	-1.08	-0.35
	(4.52)	(4.33)	(3.88)
Financials	1.32	1.93	2.45
	(2.79)	(2.63)	(2.40)
Health care	-4.80	-4.31	-4.14
	(3.43)	(3.38)	(3.03)
Consumer staples	-0.20	-0.48	-1.05
	(3.81)	(3.64)	(3.26)
Consumer discretionary	3.80	4.41	2.86
	(2.97)	(2.84)	(2.57)
Industrials	0.90	2.05	0.27
	(2.93)	(2.82)	(2.53)
Materials	-2.59	0.39	1.10
	(2.85)	(2.73)	(2.45)
Constant	0.32	0.47	0.07
	(5.57)	(6.62)	(6.12)

$ROA_{i,t} = constant_t + \beta_{1t}*structural_{i,t} + \beta_{2t}*behavioural_{i,t} + \beta_{3t}*disclosure_{i,t} + \beta_{4t}*size_{i,t} + \beta_{5t}*age_{i,t} + \beta_{6t}*foreign_{i,t} + \beta_{7t}*leverage_{i,t} + \beta_{8t}*capex_{i,t} + \beta_{9t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A9 Corporate governance score and one-year sales growth

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Score	-12.75***	0.46	4.28***	-18.63*	2.12	7.39***
	(5.40)	(1.69)	(1.32)	(10.46)	(3.06)	(2.33)
Age	0.57	-0.25	-0.54**	0.57	-0.27	-0.55**
	(1.44)	(0.37)	(0.26)	(1.45)	(0.37)	(0.26)
Foreign	-105.70	-47.87**	-3.55	-89.51	-47.82**	-4.73
	(92.33)	(22.60)	(18.10)	(92.15)	(22.50)	(18.12)
Market capitalisation	0	0	0	0	0	0
	0)	(0)	(0)	(0)	(0)	(0)
Leverage	0.01	-0.02	0	0.01	-0.02	0
	(0.07)	(0.02)	(0)	(0.07)	(0.02)	(0.01)
Capex	-0.02	0	0	-0.02	0	0
	(0.09)	(0)	(0.01)	(0.09)	(0)	(0.01)
Utilities	12.04	28.66	-31.77	6.62	27.41	-33.53
	(181.38)	(46.33)	(33.23)	(182.17)	(46.32)	(33.27)
Telecommunications	100.56	12.52	-29.18	81.72	12.54	-27.27
	(150.31)	(40.03)	(27.05)	(150.61)	(39.96)	(27.08)
Information technology	26.27	11.94	-48.58**	19.43	11.54	-49.19**
	(132.33)	(33.82)	(24.63)	(132.85)	(33.80)	(24.65)
Financials	65.05	20.27	-42.08***	58.40	20.68	-41.55***
	(83.60)	(20.84)	(15.54)	(83.97)	(20.83)	(15.56)
Health care	52.11	8.62	-14.95	42.24	9.15	-13.58
	(103.21)	(26.57)	(19.53)	(103.60)	(26.57)	(19.56)
Consumer staples	28.92	-10.29	-50.41***	20.36	-11.03	-49.76***
	(114.12)	(28.98)	(21.13)	(114.50)	(28.96)	(21.14)
Consumer discretionary	1.51	24.16	-41.78***	-2.97	24.21	42.61***
	(97.78)	(22.18)	(16.55)	(88.13)	(22.16)	(16.55)
Industrials	22.99	5.65	-37.53**	20	5.67	-37.47**
	(86.99)	(22.06)	(16.45)	(87.37)	(22.04)	(16.46)
Materials	193.07**	33.91	-29.16*	184.67**	34.30	-26.73*
	(85.46)	(21.47)	(16.05)	(85.93)	(21.47)	(16.07)
Constant	330.02**	15.15	-45.68	169.08	9.17	0.78
	(153.40)	(47.31)	(37.55)	(115.53)	(32.63)	(25.49)

$SalesGrowth_{i,t} = constant_t + \beta_{1t}*score_{i,t} + \beta_{2t}*size_{i,t} + \beta_{3t}*age_{i,t} + \beta_{4t}*foreign_{i,t} + \beta_{5t}*leverage_{i,t} + \beta_{6t}*capex_{i,t} + \beta_{7t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A10 Corporate governance ranking and one-year sales growth

	BASED ON 28 PRINCIPLES			BASED ON 10 PRINCIPLES		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
Rank high	-64.30	-6.03	28.95***	-55.23	2.93	18.75**
	(54.73)	(14.23)	(10.64)	(48.80)	(12.51)	(9.14)
Rank medium	-31.28	-19.02	24.71***	-28.92	-8.47	14.49
	(49.82)	(13.36)	(10.27)	(52.15)	(12.91)	(9.41)
Age	0.56	-0.26	-0.53**	0.68	-0.26	-0.56**
	(1.46)	(0.37)	(0.26)	(1.48)	(0.37)	(0.27)
Foreign	-72.70	-47.41**	-3.64	-69.05	-46.60**	-5.58
	(91.96)	(22.47)	(18.24)	(92.24)	(22.61)	(18.40)
Market capitalisation	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)
Leverage	0.01	-0.02	0	0.01	-0.02	0
	(0.07)	(0.02)	(0.01)	(0.07)	(0.02)	(0.01)
Capex	-0.02	0	0	-0.02	0	0
	(0.10)	(0)	(0.01)	(0.1)	(0)	(0.01)
Utilities	-0.71	33.03	-35.05	5.41	32.06	-34.18
	(184.06)	(46.31)	(33.51)	(186.05)	(46.67)	(33.78)
Telecommunications	73.82	15.88	-30.03	78.46	16.20	-28.13
	(151.49)	(39.93)	(27.31)	(152.15)	(40.21)	(27.47)
Information technology	15.02	13.08	-47.03*	15.26	15.02	-49.01**
	(133.63)	(33.75)	(24.79)	(133.70)	(34.02)	(24.95)
Financials	62.04	23.98	-45.66***	60.84	22.45	42.34***
	(84.63)	(20.96)	(15.71)	(84.56)	(21.01)	(15.75)
Health care	47.77	10.78	-18.26	47.05	10.61	-17.12
	(104.39)	(26.55)	(19.66)	(104.38)	(26.73)	(19.78)
Consumer staples	19.89	-7.15	-51.68***	18.98	-8.11	-49.76**
	(115.39)	(28.97)	(21.32)	(115.36)	(29.18)	(21.43)
Consumer discretionary	-2.75	26.56	-46.43***	-2.90	26.27	-44.15***
	(88.97)	(22.19)	(16.71)	(89.07)	(22.36)	(16.77)
Industrials	24.58	5.39	-40.79***	24.30	6.02	-39.63***
	(88.29)	(22.03)	(16.61)	(88.37)	(22.17)	(16.70)
Materials	192.94**	34.17	-28.75*	190.40**	33.99	-27.22*
	(86.33)	(21.42)	(16.15)	(86.32)	(21.49)	(16.27)
Constant	44.90	35.96*	46.50***	34.43	27.35	55.56***
	(83.95)	(21.83)	(16.96)	(80.94)	(20.80)	(16.34)

$SalesGrowth_{i,t} = constant_t + \beta_{1t}*rankhigh_{i,t} + \beta_{2t}*rankmedium_{i,t} + \beta_{3t}*size_{i,t} + \beta_{4t}*age_{i,t} + \beta_{5t}*foreign_{i,t} + \beta_{6t}*leverage_{i,t} + \beta_{7t}*capex_{i,t} + \beta_{8t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A11 Individual corporate governance principles and one-year sales growth

	2004	2005	2006
Principle 1	284.69	29.00	40.15
	(201.37)	(87.85)	(63.43)
Principle 2	-36.01	0.18	5.31
	(45.66)	(11.68)	(8.21)
Principle 3	172.16	-3.42	7.28
	(132.05)	(36.75)	(29.76)
Principle 4	16.91	-10.68	-5.67
	(49.63)	(13.92)	(11.12)
Principle 5	-9.74	60.28*	18.03
	(112.67)	(33.44)	(26.51)
Principle 6	-49.23	-21.41	-5.84
	(110.46)	(30.17)	(22.26)
Principle 7	-71.55	-29.44	24.34
	(108.51)	(26.46)	(18.92)
Principle 8	-264.21***	42.26**	-3.62
	(72.82)	(21.21)	(16.34)
Principle 9	-46.50	-3.71	19.38**
	(49.29)	(13.04)	(9.70)
Principle 10	12.49	15.54	5.89
	(138.09)	(42.48)	(32.05)
Age	0.90	-0.24	-0.53**
	(1.45)	(0.37)	(0.27)
Foreign	-81.75	-43.10*	-3.23
	(93.55)	(22.82)	(18.82)
Market capitalisation	0	0	0
	(0)	(0)	(0)
Leverage	0.03	-0.02	0
	(0.07)	(0.02)	(0.01)
Capex	-0.02	0	0
	(0.09)	(0)	(0.01)
Utilities	35.02	28.32	-33.82
	(181.20)	(46.47)	(33.66)
Telecommunications	77.53	6.94	-26.70
	(149.24)	(40.22)	(27.55)
Information technology	99.12	7.97	-52.56**
	(134.11)	(34.12)	(25.31)
Financials	71.51	16.54	-40.74***
	(83.20)	(21.18)	(15.80)
Health care	82.76	10.45	-12.08
	(103.40)	(27.33)	(20.29)
Consumer staples	62.21	-13.74	-48.61**
	(114.84)	(29.39)	(21.60)
Consumer discretionary	24.10	24.37	-43.61***
	(87.69)	(22.25)	(16.79)
Industrials	52.15	2.75	-38.26**
	(86.83)	(22.26)	(16.79)
Materials	211.23***	34.40	-26.31
	(85.43)	(21.80)	(16.53)
Constant	-78.74	-49.89	-31.45
	(212.69)	(94.03)	(69.52)

$SalesGrowth_{i,t} = constant_t + \beta_{1t}*principle1_{i,t} + \beta_{2t}*principle2_{i,t} + \beta_{3t}*principle3_{i,t} + \beta_{4t}*principle4_{i,t} + \beta_{5t}*principle5_{i,t} + \beta_{6t}*principle6_{i,t} + \beta_{7t}*principle7_{i,t} + \beta_{8t}*principle8_{i,t} + \beta_{9t}*principle9_{i,t} + \beta_{10t}*principle10_{i,t} + \beta_{11t}*size_{i,t} + \beta_{12t}*age_{i,t} + \beta_{13t}*foreign_{i,t} + \beta_{14t}*leverage_{i,t} + \beta_{15t}*capex_{i,t} + \beta_{16t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.

Table A12 Grouped corporate governance principles and one-year sales growth

	2004	2005	2006
Group 1 — Structural	-8.54	-3.39	4.25
	(13.05)	(3.46)	(2.76)
Group 2 — Behavioural	45.20**	-1.14	7.06
	(21.06)	(6.98)	(5.30)
Group 3 — Disclosure	-104.80***	10.09	0.78
	(29.74)	(8.97)	(6.78)
Age	0.41	-0.22	--0.54**
	(1.42)	(0.37)	(0.26)
Foreign	-139.74	-42.73*	-5.26
	(91.94)	(23.03)	(18.57)
Market capitalisation	0	0	0
	(0)	(0)	(0)
Leverage	0.03	-0.02	0
	(0.07)	(0.02)	(0.01)
Capex	-0.03	0	0
	(0.09)	(0)	(0.01)
Utilities	-1.32	29.32	-31.84
	(178.67)	(46.32)	(33.33)
Telecommunications	93.96	13.30	-28.83
	(148.11)	(40.04)	(27.16)
Information technology	16.32	11.21	-48.09*
	(130.40)	(33.83)	(24.73)
Financials	46.19	21.06	-42.26***
	(82.59)	(20.85)	(15.60)
Health care	62.62	9.63	-13.93
	(101.78)	(26.74)	(19.72)
Consumer staples	30.37	-9.37	-49.82***
	(112.55)	(29.04)	(21.26)
Consumer discretionary	-11.36	23.98	-42.00***
	(86.54)	(22.18)	(16.61)
Industrials	17.64	5.95	-36.89**
	(85.74)	(22.09)	(16.55)
Materials	188.75**	35.00	-27.52*
	(84.18)	(21.48)	(16.12)
Constant	400.94***	-14.73	-48.08
	(164.24)	(53.62)	(41.94)

$SalesGrowth_{i,t} = constant_t + \beta_{1t}*structural_{i,t} + \beta_{2t}*behavioural_{i,t} + \beta_{3t}*disclosure_{i,t} + \beta_{4t}*size_{i,t} + \beta_{5t}*age_{i,t} + \beta_{6t}*foreign_{i,t} + \beta_{7t}*leverage_{i,t} + \beta_{8t}*capex_{i,t} + \beta_{9t}*industry_{i,t} + residual_{i,t}$

Numbers in table are ordinary least squares regression coefficients with standard errors in parentheses. Statistical significance at the 10 per cent, 5 per cent and 1 per cent level indicated by *, ** and *** respectively. By leaving energy out of the regression we obtain results of performance of each industry relative to this left out category.