Corporate Governance and Board Composition: diversity and independence of Australian boards

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The board of directors is one of a number of internal governance mechanisms that are intended to ensure that the interests of shareholders and managers are closely aligned, and to discipline or remove ineffective management teams. Among the most significant governance issues currently faced by the modern corporation are those relating to diversity, such as gender and age, and independence of directors.

While board diversity and independence has been a growing area of research in recent years, most empirical research on this topic has been restricted to US data. The generalisability of such findings may not extend across national boundaries due to different regulatory and economic environments, cultural differences, the size of capital markets and the effectiveness of governance mechanisms. Consequently, the importance and value of various governance structures, including board diversity and independence, should be separately examined in each country, and the influential factors investigated.

This study reports on the diversity and independence of the board membership of 100 top Australian companies in 2003. Australia has one of the most developed stock markets in the Asia-Pacific region. With the collapse of several well-known public companies such as Ansett, OneTel and HIH, there is an increasing demand to evaluate the corporate governance practices of Australian companies, including the composition of boards. Accordingly, this research provides a timely review of the state of corporate governance in Australia so far as board composition is concerned.

Keywords: Board diversity, board independence, Australia

Introduction

The recent spate of accounting scandals worldwide has raised investor concerns about corporate governance in all types of organisations. The demise of previously thought to be "unsinkable" and beyond-reproach organisations such as Enron and WorldCom in the USA, and Ansett, OneTel and HIH in Australia has had investors and other stakeholders demanding better corporate governance, especially by means of "cleaning up" the boardroom (Cheng, 2003; Houle, 1990; Park and Shin, 2003).

The Board of Directors (BOD) is one of a number of internal governance mechanisms which are intended to ensure that the interests of shareholders and managers are closely aligned, and to discipline or remove ineffective management teams (Barnhart *et al*., 1994; Park and Shin, 2003). Among the most significant governance issues currently faced by the modern corporation is board diversity and independence (Milliken and Martins, 1996). Although there has been mixed evidence and constant debate regarding the effect of board composition on corporate performance (e.g. De Andres *et al*., 2005; Dulewicz and Herbert, 2004), diversity of board membership is still considered desirable for two important reasons. First, prior literature suggests that diversity of group membership increases dis-

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cussion, the exchange of ideas and group performance (e.g. Hoffman and Maier, 1961; Knippenberg *et al.*, 2004; Schippers *et al.*, 2003; Watson *et al.*, 1993). In the context of board membership, diversity has been advocated as a means of improving organisational value and performance by providing the board with new insights and perspectives (Barnhart *et al.*, 1994; Carter *et al.*, 2003; Coffey and Wang, 1998; Siciliano, 1996). Second, if the function of the board is to protect the interests of the corporation's stakeholders, then it stands to reason that the board should comprise members that are representative of these stakeholders (Huse and Rindova, 2001).

While the composition of corporate boards and board diversity has been a growing area of research in recent years, most empirical research has been restricted to US data (Hyland and Marcellino, 2002; Vafeas and Theodorou, 1998), with a general absence of evidence on the practices of Australian companies (Psaros and Seamer, 2003). A number of noted exceptions include Lawrence and Stapledon (1999), Muth and Donaldson (1998), and more recently, Kiel and Nicholson (2003), whose main focus concerns the link between board characteristics (e.g. independence and network connections) and corporate performance. The focus of our current study, however, is on the contextual factors that help explain the existence (or lack of) board diversity and the level of board independence in the Australian business environment.

Specifically, in this study we have two objectives in mind. Our first objective is to examine two of the board diversity attributes (gender, age) and the board independence of 100 top Australian publicly listed companies. Our second (and primary) objective is to investigate whether board diversity and independence is associated with corporate factors including industry, board size and concentration of the majority shareholder base. The study of board diversity and independence and the influential factors involved has important public policy implications because of an ongoing debate about the role of government and markets in disciplining management (Vafeas and Theodorou, 1998). This is especially timely in Australia with the release of the Australian Stock Exchange (ASX) Corporate Governance Council's much anticipated report *Principles of Good Corporate Governance and Best Practice Recommendations* in March 2003, as well as the 2003 Horwath report, which is critical of the Australian companies' current corporate governance practices in general.

Overall, our findings indicate that while the boards of Australian companies generally have a high level of independence, there is very limited gender or age diversity evident among directors despite the recent public commentary about corporate governance and the advocacy of board diversity in Australia. Further, we find that the size of board significantly influences the age range of directors, while industry type affects the age range and independence of directors. We also find that the level of shareholder concentration significantly affects the gender composition and independence of boards of directors.

The remainder of the paper is structured as follows. The next section reviews the existing literature on board diversity and independence. This is followed by the research methodology section. We then examine our findings from the study; finally, a summary and conclusions with suggestions for future research are presented.

Board diversity

Board diversity can be defined as variety in the composition of the BOD. There are two categories of diversity – observable diversity, which is readily detectable attributes of directors, and less visible diversity, such as background of directors (Milliken and Martins, 1996). Observable diversity includes race/ethnic background, nationality, gender and age, while less visible diversity comprises educational, functional and occupational backgrounds, industry experience, and organisational membership. Some of the advantages of board diversity include promotion of a better understanding of the market place, increased creativity and innovation, and effective problem solving (Carter *et al.*, 2003). Further, board diversity can promote more effective global relationships and increase board independence because people with different gender, ethnicity or cultural background might ask questions that would not come from directors with more traditional backgrounds (e.g. Arfken *et al.*, 2004). For the purpose of the current study, we focus on two of the observable diversity characteristics of board members – gender and age.

Gender and boards

Gender is arguably the most debated diversity issue, not only in terms of board diversity, but also in politics and in other general societal situations. For example, in recent years, there have been various quota systems designed to increase representation of women in government (e.g. gender quotas exist for political parties in countries like France and

Sweden). The issue of gender in board diversity is especially timely given the current movement in Europe to increase the number of women on boards. In Norway, for example, the coalition government in 2002 threatened to require companies to make their boards 40 per cent female if they did not do so voluntarily (Ripley, 2003).

Indeed, there exists some evidence that women on the board can increase a corporation's value. It has been suggested that there are two advantages of having women on board (Brennan and McCafferty, 1997). First, women are not part of the "old boys" network, which allows them to be more independent. Second, they may have a better understanding of consumer behaviour, the needs of customers, and opportunities for companies in meeting those needs. Further, a recent study at the university of Michigan Business School examining stock value and earnings growth following initial public offerings (IPO) in the USA found that IPO were significantly more successful when the companies involved had senior female executives. That is, having women in top management can result in higher earnings and greater shareholder wealth (Ripley, 2003). Better corporate governance can also be achieved by having women on the BOD, and subsequently, this may translate to competitive advantage (Bernardi *et al.*, 2002).

In the USA, possibly recognising the value of women on boards, it has been found that 87 per cent of the Fortune 500 companies had at least one woman on their BOD (Hyland and Marcellino, 2002). The current representation of women on boards in other countries, however, is not very encouraging, even in egalitarian havens like Norway and Sweden. For example, 65 per cent of Norway's largest 600 companies do not have a single woman on their boards, and in Sweden, only 2 per cent of CEOs are women (Ripley, 2003). Of the 89 Irish listed companies, only 30 per cent of the companies have women on the board, and they comprise 4.3 per cent of all directors (Brennan and McCafferty, 1997). Further, only 3 per cent of the top FTSE companies in the UK have female executive directors, and in Japan, only 3 per cent of listed companies have females on their BOD (Hyland and Marcellino, 2002).

In Australia, while there is a 44.5 per cent participation rate of females in the labour force, results from the recent Australian Census of Women in Leadership (Knight, 2004) reveal that there has been no change in the number of women in chief executive positions and only a 0.2 per cent increase in female board directors.

Age of directors

It is not unusual to perceive most of the members of corporate boards to be well educated, mature, experienced, and subsequently, middle-aged. Traditionally, most board tables have been shared by middle to retirement aged members (Gilpatrick, 2000) who have previously served as executives of other companies in the same industry. This perception, however, is slowly changing and there is an active promotion of age diversity in order to encourage the different perspectives of different age groups, and as an integral part of succession planning. Indeed, most boards need to have some spread in age – while the older group can provide experience, wisdom, and usually the economic resources, the middle group carries the major positions of active responsibilities in corporations and in society, whereas the younger group has the energy and drive to succeed (Houle, 1990) and plan ahead for the future.

While there is little empirical evidence that age diversity can lead to better corporate performance, age remains one of the most important observable background diversity issues for the BOD. There also exists an argument that given the different types of stakeholders each company must represent on boards, diversity in age of directors may assist such process by bringing different perspectives. For example, companies in the consumer industry may target their customers in different age groups with a variety of products and services – and the best way to represent the interests of these consumers would be to have directors who are from different age groups, and subsequently have somewhat different perspectives (Huse and Rindova, 2001). That is, companies not responding to the concerns of their stakeholders may forgo the benefits of a favourable reputation (Fombrun, 1996, cited in Huse and Rindova, 2001).

Board independence

The idea that the BOD of any corporation should predominantly comprise outside directors, with a presumed independence from management, is not new. For example, Chandler (1975, pp. 74–5) argued more than 30 years ago that:

> *. . . it is almost ridiculous to have to justify the importance of a strong majority of outside directors. If it is true that the board must steadfastly represent the stockholders in making a continuous evaluation of the CEO's performance, then a board of predominately (even overwhelmingly) outsiders logically follows.*

Further, the idea that the chairperson of the board should be an independent director has gained much support as an internal governance mechanism to ensure the overall independence of the board (Beasley *et al.*, 2000; Tian and Lau, 2001).

While there is no denying the importance of board independence, there exists no common consensus as to the definition of "independence" (Brennan and McDermott, 2004; Hooghiemstra and van Manen, 2004). Most companies identify their directors in terms of "executive" and "non-executive" directors, and disclose very little information regarding their directors to external stakeholders. Subsequently, studies examining the independence of directors have found it very difficult to compare one company's definition of director independence to other companies. For example, previous studies have avoided the word "independence" by using "outside directors" to describe directors who are presumed to be independent from management (Ajinkya *et al.*, 2005), or simply consider potential differences between "non-executive" and "executive" directors.

Prior literature generally acknowledges a director's independence when he/she is independent from senior management of the company (Anderson *et al.*, 2004; Dulewicz and Herbert, 2004; Hooghiemstra and van Manen, 2004). It is only recently that various government commissioned reports have added to the existing interpretation of what it means for a director to be "independent from senior management" (for example, see the ASX Corporate Governance Council's Report, 2003 and the Higgs Report, 2003).[1] As a result, there exists a lack of consistency in interpreting the definition of independence as well as a lack of disclosure of such information by corporations in their annual reports and in other forms of corporate communication (Brennan and McDermott, 2004).[2]

Notwithstanding the lack of consensus on the definition of outside or independent directors, it is still perhaps the most "recommended" practice of good corporate governance that corporations should, in an effort to enhance the effectiveness of the board, constitute a BOD with a majority of outside directors. This is with a presumption that they can make a positive contribution to the board's monitoring responsibilities (Anderson *et al.*, 2004; Beasley, 1996; Brennan and McDermott, 2004; Dulewicz and Herbert, 2004; Fields and Keys, 2003; Park and Shin, 2003), and subsequently, towards better corporate performance. Indeed, there is some evidence that having an independent board is correlated with less cases of fraudulent financial reporting (Beasley *et al.*, 2000; Dunn, 2004).

In Australia, the publication of the ASX Corporate Governance Council's *Principles of Good Corporate Governance and Best Practice Recommendations* in March 2003 heralded a new era of corporate governance practices in Australia. Among the 10 main principles recommended, Principle 2 specifically deals with the "structure of the board to add value" to individual corporations. Within this principle, ASX defines independence of directors as "being independent of management and free of any business or other relationship that could materially interfere with – or could reasonably be perceived to materially interfere with – the exercise of their unfettered and independent judgement". A full definition of independence recommended by the ASX Corporate Governance Council to assess director independence is summarised in Appendix 1.

For the purpose of this study, we specifically consider three of the ASX recommendations under Principle 2. Recommendation 2.1 states that the majority of the board should be independent directors. Recommendation 2.2 states that the chairperson should be an independent director, and Recommendation 2.3 suggests that the roles of chairperson and chief executive officer should not be exercised by the same individual.

Factors associated with board diversity

For the purposes of this paper, we consider whether industry type, board size, and shareholder concentration are related to board diversity and independence.

There has been some evidence that board size and industry of the company are important factors. For example, Hyland and Marcellino (2002) found that the number of women on the BOD is correlated with the size and industry of the organisation. Recent studies also found that large boards are valuable for the breadth of their services purely by having more directors to spread around (Chaganti *et al.*, 1985; Klein, 2002) and subsequently, corporations with large boards can afford to have more diversity among their directors (Klein, 2002; Luoma and Goodstein, 1999). Further, recent efforts at improving diversity have been embraced by large companies offering a variety of diversity training which may translate into the appointment of a more diverse board (Hyland and Marcellino, 2002). The industry in which a company operates may also affect the level of board diversity. For example, companies in the services sector, including healthcare and technology-related industries, are more likely to employ female directors than companies from other industries (Harrigan, 1981). It has also been stated that banking and finance sector companies have boards which are "too big, too old, and too male" (Engen, 2002). Further, according to Engen (2002), banks traditionally have boards which are rife with insiders. Accordingly, it is expected that:

Hypothesis 1: The larger the size of the board, the more diverse and independent will be the BOD.

Hypothesis 2: There is an association between industry type, and the diversity and independence of the BOD.

The emergence of stakeholder theory in board diversity was prompted by the growing recognition of the need to take account of the wider interests of society. One proxy for such interests is the presence of minority shareholders, or alternatively, the degree of shareholder concentration measured by the percentage of shareholdings held by major shareholders (Barnhart *et al*., 1994; Carter *et al*., 2003; Hillman *et al*., 2001; Tian and Lau, 2001).

It is expected that with the increasing importance of broadening the domain of corporate governance beyond major shareholders to other stakeholders, such as small shareholders, suppliers, and employees, board diversity and independence will promote procedural fairness by providing a means of ensuring that their interests are more directly represented in corporate decision making (Luoma and Goodstein, 1999). Thus, we expect that a lower shareholder concentration (i.e. shares held by more diverse shareholder groups) will result in greater demands by shareholders to have a broadly represented board. Further, having greater board diversity may help the company in legitimising its activities as a means of promoting corporate social responsibility by virtue of formally introducing non-economic considerations[3] into board decision making, and by fostering a more open governance process that better assures that stakeholder interests are formally represented in corporate governance (Hillman *et al*., 2001; Luoma and Goodstein, 1999). That is, we expect that:

Hypothesis 3: The lower the levels of shareholder concentration (represented by a lower percentage of the top 20 shareholders relative to the total shareholding), the more diverse and independent will be the BOD.

Research methodology

In order to examine the board diversity of the top 100 Australian publicly listed companies, we first obtained a list of the top 500 Australian public companies by market capitalisation from the April 2003 issue of *Business Review Weekly*, an Australian publication. From the list, each of the company's website addresses was then obtained through *Huntley's 500* publication. Subsequently, information on board diversity was collected from the company's annual report under the "Board of Directors" and/or "Corporate Governance Report" sections.[4] For companies not disclosing more detailed information on their directors, in particular, their gender and age, we also examined their websites for further information.[5]

For the purpose of the current study, companies were excluded from the sample if the relevant information on gender and independence of their directors was unavailable either in the annual report or on their corporate website. As such, the sample of top Australian companies selected for the current study comprises 100 of the largest publicly listed companies by market capitalisation, with their rankings based on market capitalisation ranging from 1 to 119.

The independence of each director was assessed according to the definitions provided by the ASX Corporate Governance Council recommendations (see Appendix 1). All sample companies disclosed how they define director independence and whether these definitions are consistent with the recommendations of the ASX Corporate Governance Council. As previously discussed, one of the most difficult issues regarding independence is the assessment of independence and although substantial care was taken when assessing independence, it must be noted that the independence of directors in the current study was based on the information disclosed by each company. Subsequently, additional information regarding whether the individual directors served the board in a "non-executive" capacity was also collected.[6]

Information on industry classification was obtained from *Huntley's 500* which provided data according to the Global Industry Classification Standard (GICS). For the purpose of the current study, we code sample companies into four GICS industry classifications (refer to Table 1). The percentage of shares held by the top 20 shareholders in each company was also obtained from *Huntley's 500* and cross-referenced with the annual report.

In summary, information on the board diversity and independence of 100 of the largest Australian listed companies was compiled from each company's annual report and website and *Huntley's 500* publication for the purposes of the current study. Due to the non-subjective and numeric nature of the data, two of the co-authors compiled board diversity

Table 1: Descriptive statistics on industry

Industry	Number of companies	Industry classification for regression analysis	
Consumer discretionary	13	Consumer services and products	IN1
Consumer staples	12		
Retail	1		
Finance	35	Financials	IN2
Trusts	1		
Industrials	9	Materials and industrials	IN3
Materials	18		
Health care	5	Others	IN4
Energy	3		
Telecommunication services	2		
Utilities	1		
Total	100		

information on gender, age range of board members, and independence separately. The reliability of the data was then verified by auditing data from randomly selected companies which had been compiled independently and separately.

Results

Descriptive analysis

The 100 companies in the sample are from 11 different industries, with the majority of companies in the Finance (35 companies), Materials (18 companies) and Consumer Discretionary and Staples (25 companies) industries. The average number of directors on the board is 8.19 (refer to Table 2), with quite a significant variation in board size ranging from 4 (an Industrials company) to 16 (a Consumer Discretionary company). In summary, 39 of the 100 top Australian companies have a board size of 8 or 9 directors.

In total, there are 820 director positions in the 100 sample companies. Table 3 shows details of diversity and independence of the 820 directors. In summary, 735 positions (89.63 per cent) are occupied by male directors and 85 positions (10.37 per cent) by female directors. There are 193 positions (23.54 per cent) occupied by executive directors, and of the 627 non-executive positions, 530 (84.53 per cent) are taken by independent non-executive directors as per definitions by the ASX Corporate Governance Council's recommendations. Information on the age of directors, however, has been difficult to obtain. Age is disclosed for 606 directors only (73.90 per cent) by 70 companies. Most directors in the sample companies are aged between 51 and 70 (78.38 per cent). The following section describes in detail the diversity and independence of board.

Table 2: Descriptive statistics on board size

Board size	Number of companies
4 to 5	14
6 to 7	22
8 to 9	39
10 to 11	17
12 and over	8
Total	100
Descriptive statistics	
Mean	8.19
Std Dev	2.24
Max	16
Min	4

Gender diversity

The first type of diversity we are interested in is gender. It can be seen from Table 4 that overall, there are very few female directors in Australia's top 100 companies. Of the top 100 companies, 33 companies do not have any female directors. Further, a majority of companies in our sample have only one female director (51 companies), and given the average board size of 8–9 directors, this is obviously a very small percentage. Indeed, of the total of 820 director positions in the 100 companies, only 85 are occupied by female directors (10.37 per cent), representing less than one female

Table 3: Independence and diversity of directors on BOD of top 100 companies

	Frequency (no. of directors)	Percentage (%)
Total number of director positions in 100 companies	820	
Independence		
Positions occupied by executive directors	193	23.54
Positions occupied by non-executive directors	627	76.46
Non-independent non-executive directors	97	15.47
Independent non-executive directors	530	84.53
Gender		
Positions occupied by male directors	735	89.63
Positions occupied by female directors	85	10.37
Age (disclosed by 70 companies only)		
Number of directors whose age is disclosed	606	
Directors under 41	12	1.98
Directors between 41 and 50	105	17.33
Directors between 51 and 60	266	43.89
Directors between 61 and 70	209	34.49
Directors over 71	14	2.31

Table 4: Presence of female board directors

Panel A: Gender diversity; frequency distribution

Composition of the board	Frequency (no. of companies)
No female directors	33
1 female director	51
2 female directors	15
More than 2 female directors	1
Total	100

Panel B: Descriptive statistics; percentage of female directors

	Percentage (%)
Number of companies	100
Mean	10.34
Std dev	9.02
Max	40.00
Min	0.00

director per company. It is also worth noting that none of the companies has a BOD comprising a majority of female directors and that only one female director holds the position of chairperson.

It is also interesting to note that the 85 female BOD positions are held by 47 female directors only. Of these 47 female directors, 15 hold BOD positions in more than two companies. Further, seven directors currently hold BOD positions in more than four companies. This may be an indication that there seems to be a smaller pool of female directors than male directors and that the "glass ceiling" is still in place.

Our results are consistent with the recent Australian Census of Women in Leadership (Knight, 2004) which also revealed that the "glass ceiling" is still firmly in place in Australia. Indeed, gender diversity in Australian boards is surprisingly low, especially compared to the USA (where only 13 per cent of Fortune 500 companies did not have a female director). It is, however, somewhat higher than the female representation reported in some European and Asian countries as discussed previously.

Age diversity

The age range of directors is also an important indicator of board diversity. Unlike gender, companies in general are less willing to disclose this information, with only 70 companies disclosing their directors' ages either in the annual report or on their corporate websites. For the 70 companies disclosing age information about directors, a majority of directors (78.38 per cent) are aged between 51 and 70 (refer to Table 3). This is not unexpected since there is an expectation that most of the directors are ex-managers from various corporations who are now in position to sit on other people's corporations and enjoy their "retirement". Not surprisingly, there are very few directors aged under 41 (1.98 per cent) and over 70 (2.31 per cent). Further, Table 5 shows that few companies in the sample (44 companies) have directors that fall across three age brackets, with none of the companies having directors across one age bracket only.

Two companies (both in the Consumer Discretionary industry) have directors across five age brackets. Interestingly, there are 14 director positions that are occupied by directors in the 70 plus age brackets and only 12 director positions in the 41 or below age group. This suggests that on average, the experience of older age groups, but not too old, may be looked upon as being more important and desirable in Australian companies than "dynamic" and "new ideas" from younger age groups.

Table 5: Age diversity

Age of directors	Frequency (no. of companies)
Not disclosed	30
Within 1 age bracket	0
Across 2 age brackets	14
Across 3 age brackets	44
Across 4 age brackets	10
Across 5 age brackets	2
Total	100

Independence of directors

As discussed previously, director independence is perhaps the most debated corporate governance issue faced by today's corporations. In the current study, we consider the extent to which the directors in the top Australian companies are outside directors, independent from senior management of the company. Table 6 shows that most of the sample companies (83 companies) have the majority of the board comprising independent directors as per Principle 2.1 of the ASX Corporate Governance Council's recommendations. Further, 15 companies have some independent directors on board, with only four companies which are without any independent director on their board. That is, on average, 64.09 per cent of the company's board are independent directors.

We also examine whether the chairperson of the board is an independent and the roles of chairperson and chief executive officer are not exercised by the same individual as per ASX Recommendations 2.2 and 2.3. Table 6 shows that a large majority of the companies (n = 73) have an independent chairperson and another 16 companies have a non-executive chairperson. Only 11 companies have appointed a chairperson who is an employee of the company (that is, an executive chairperson), and

Table 6: Level of board independence

	No. of companies		No. of companies
All NED board	3	All IND board	1
Majority NED on board	89	Majority IND on board	82
Some NED on board	5	Some IND on board	15
No NED on board	3	No IND on board	4
Mean % of NED on board	75.85	Mean % of IND on board	64.09
Std dev	19.16	Std dev	23.23
Max	100	Max	100
Min	0	Min	0
Total	100		100

Chairperson	Number of companies
Independent (IND)	73
Non-executive (NED)	16
Executive	10
CEO	1

only one company has appointed its CEO as the chairperson, a direct contradiction to ASX Recommendation 2.3.

In summary, the level of board independence in Australia is encouraging, as most companies seem to have a high level of board independence. Further, most companies have made the effort to specifically disclose the independence information in their annual report and/or their corporate website regarding the independence of their directors and whether they are acting in accordance with the ASX recommendations.

The effect of board size, shareholding concentration and industry type on board diversity and independence

To investigate the hypotheses regarding board size, shareholder concentration, and industry type, we first conducted Pearson correlations between these variables and gender, age, and independence. The descriptive statistics are presented in Table 7.

Regression analyses were then carried out on gender, age range of directors, and independence in order to test our three hypotheses. Table 8 shows the results of the regression analyses which are discussed in the following sections.[7]

Hypothesis 1: Board size

Hypothesis 1 suggests that board diversity and independence is influenced by the size of the board – that is, larger the size of the board, the more diverse and independent are the board members. As seen in Table 8, board size (refer to Table 2 for descriptive statistics) is significantly and positively associated with age diversity, which indicates that, as expected, with a greater number of directors, they are more likely to fall under different age brackets. Surprisingly, however, board size is not related to either gender diversity or director independence, suggesting that a larger board does not necessarily result in a more gender-diverse or independent BOD. While this is in direct contrast to the findings from prior research in the USA, it may be explained by the fact that generally, our sample companies have a smaller number of directors on the board than companies examined in earlier studies.[8]

Hypothesis 2: Industry type

According to Hypothesis 2, we expect to see an association between industry type, and the diversity and independence of the board. As

Table 7: Correlation matrix

	Shareholding	Board size	IND	Age range	Gender	Industry 1	Industry 2	Industry 3	Industry 4
Shareholding		0.024	−0.394**	0.195	−0.291**	0.171	0.205*	−0.275**	−0.103
Board size	0.024		0.090	0.397**	0.017	0.137	−0.022	−0.120	0.024
Independence	−0.394**	0.090		−0.352**	0.432**	−0.095	0.149	−0.125	0.108
Age range	0.195	0.397**	−0.352**		−0.085	0.493**	−0.231	−0.228	0.000
Gender	−0.291**	0.017	0.432**	−0.085		−0.015	−0.158	0.086	0.108
Industry 1	0.171	0.137	−0.095	0.493**	−0.015		−0.351**	−0.433**	−0.213*
Industry 2	0.205*	−0.022	0.149	−0.231	−0.158	−0.351**		−0.456**	−0.225*
Industry 3	−0.275**	−0.120	−0.125	−0.228	0.086	−0.433**	−0.456**		−0.277**
Industry 4	−0.103	0.024	0.108	0.000	0.108	−0.213*	−0.225*	−0.277*	

**Significant at $p < 0.01$, two-tailed.
*Significant at $p < 0.05$, two-tailed.

Table 8: Results; the effects of size, industry and shareholding on board diversity and independence

	Regression 1	Regression 2	Regression 3
	Independence	Gender	Age
Independent variable			
Board size	0.970	0.183	3.302**
Industry 1 (consumer services/products)	1.130	0.115	3.656**
Industry 3 (materials and industrials)	3.059*	–0.716	–0.355
Industry 4 (others)	1.607	0.605	1.083
Shareholding	–4.910***	–2.601*	0.970
Adjusted R^2	0.205	0.051	0.330
F statistics	6.107***	2.058*	7.785***

Excluded variable: Industry 2 (financials).
***Significant at $p = 0.000$, two-tailed.
**Significant at $p < 0.010$, two-tailed.
*Significant at $p < 0.050$, two-tailed.

mentioned previously, sample companies in the current study are coded into four industry types and subsequently, a dichotomous variable is used for each industry for the purpose of the regression analysis.

While industry type has previously been found to be associated with board diversity (for example, Hyland and Marcellino (2002) found that there was a significant association between industry and the percentage of female directors on board), our study found that industry type is significantly associated with the independence of directors and age range but not gender diversity (see Table 8). Companies in the materials and industrials industry sector have more independent boards, potentially owing to the high political costs associated with this particular industry sector: that is, these companies may consider appointing more independent boards in order to demonstrate their willingness to maintain good corporate governance. Further, the recent publication of the ASX guidelines, as well as criticisms regarding board independence may have had a positive impact on these companies.

On the other hand, while there is no significant association between gender diversity and industry type, there is an association between the age range of directors and industry type. As seen in Table 8, companies in the consumer services and products industry are likely to appoint directors in a more diverse age range. This supports the previous argument that since consumer sector companies have to deal with a wide range of consumers in different age groups, it is likely that the interests of consumers are best represented by directors across a wider range of age groups. Consumer industry sector companies, however, do not have more board diversity in terms of gender and also no higher levels of director independence than companies in other industries.

In summary, while board independence and the age diversity of boards are significantly influenced by industry type, gender diversity is not found to be associated with industry type.

Hypothesis 3: Shareholder concentration

Our third and final hypothesis suggests that companies with lower shareholder concentration are expected to have a more diverse and independent BOD. Shareholder concentration was measured by the percentage of shareholdings of the top 20 shareholders, and the descriptive statistics are shown in Table 8. On average, the top 20 shareholders of our sample company hold 63.93 per cent of the total number of shares. The range of shareholder concentration was relatively broad, from 7.56 per cent (a Financial Industry company) to 99.93 per cent (a Materials Industry company).

As indicated in Table 9, shareholder concentration is significantly and negatively associated with independence and gender, but not age range. In other words, companies with higher shareholder concentration are likely to have fewer female directors and to have a significantly lower level of board independence. There is, however, no significant relationship between shareholding and the age range of directors. These results imply that companies with a higher shareholder concentration are under less pressure to consider the perspectives of different types of shareholders, and

Table 9: Percentage of shareholdings for top 20 shareholders

Total shareholding held by top 20 shareholders	Frequency	Percentage (%)
<10%	2	2.06
<40%	9	9.28
<50%	9	9.28
<60%	11	11.34
<70%	27	27.84
<80%	23	23.71
<90%	11	11.34
>90%	5	5.15
Total	97	100
Descriptive statistics		
Mean	63.93	
Std Dev	18.36	
Max	99.93	
Min	7.56	

thus do not need to promote as diverse and independent a BOD as other corporations with a lower shareholder concentration. Hypothesis 3 is therefore accepted for independence and gender diversity.

Summary and conclusions

The purpose of this study was to examine the extent of board diversity and independence in 100 top Australian corporations in 2003 and the influential factors involved. This research is especially timely given that board diversity and independence are significant corporate governance issues facing the modern corporation. Despite the recent criticisms regarding the corporate governance practices of Australian corporations, the empirical research to date has been relatively limited.

The main findings of our research on the extent of diversity relating to gender, the age of directors, and independence in Australia's largest listed companies reveal mixed results. In the case of gender, it is important to note that 33 companies (from a sample of 100 companies) did not have a female director. While 51 companies had one female director, only 15 companies had two or more female directors. Significantly, only 10.37 per cent of the total director positions in Australia's top companies are occupied by a female. Further, only the level of shareholding concentration was found to be a significant factor in determining gender diversity.

We also found that the age of directors is clearly a sensitive aspect of diversity in that only 70 companies in our sample disclosed this kind of information. Of these, a preference for directors in the older age groups is evident, with more than 80 per cent of directors being above 50 years of age. Age diversity is significantly and positively associated with the size of the board. Further, there is a positive association between age diversity and industry type where companies from the consumer services and product industry sector are found to have appointed directors in a more diverse age range.

In contrast, the findings on director independence are revealing in that 83 companies had a board comprising a majority of independent directors. Related to this is the finding that 73 companies had an independent chairperson. These findings are in accordance with the 2003 recommendations by the ASX Corporate Governance Council. Both industry type and shareholder concentration were found to significantly influence the level of board independence: companies in the materials and industrials industry sector and with lower levels of shareholder concentration are more likely to have a BOD comprising a significant proportion of independent directors.

In summary, the boards of 100 of Australia's top companies tend to have a somewhat conservative diversity profile. Specifically, an Australian BOD is likely to comprise 8–9 directors, be headed by an independent male "chairperson" and probably include not more than one female director. A typical director on the BOD is likely to be between 51 and 70 years of age, male, and an independent non-executive director.

Future research will explore the extent of diversity in Australian companies in more depth by investigating the less visible backgrounds and roles of directors in more detail. A larger sample of companies also needs to be examined to enable shareholder concentration, size and industry effects to be analysed more closely. A further stage of the research would extend the scope of the study to include a number of major countries in the Asia–Pacific region, thus facilitating a comparative study of the impact of institutional and cultural differences on board diversity and independence practices.

Notes

1. According to these reports, an independent director, among other criteria, should *not* be a substantial shareholder of the company, employed by the company, significant sup-

plier or customer of the company, or an original founder of the company.

2. For example, some of the companies identifying independent directors do not define what they mean by "independent", thereby rendering a direct comparison of board independence ineffective. In other instances, companies either do not identify which director is independent, choosing to disclose only the "presence" of the independent directors, or they simply identify "non-executive" directors as opposed to executive directors.
3. Non-economic considerations include environmental awareness and community involvement. Having outside directors associated with such considerations may enhance the reputation of the company.
4. For the purposes of this research, we examined the latest available annual reports of the sample companies – for most companies, they were for the financial year ending 30 June 2003.
5. In this study, we are interested in the actual "practice" of board diversity and independence of each company, not on issues relating to the "disclosure" of board composition. While the level of disclosure on boards of directors is an interesting corporate governance research area, it is beyond the scope of the current study.
6. Due to the difficulties associated with the definition of independence, a common approach in previous studies was to consider the differences between executive and non-executive directors. For the purpose of this study, the classification of directors into executive and non-executive was used to verify the findings involving independence of directors.
7. The assumptions underlying multiple regression models were tested for multicollinearity based on the correlation matrix as well as the Variance Inflation Factor (VIF) using the general rule for checking multicollinearity which states that the correlation should not exceed 0.800 and the VIF should be less than 10 (Field, 2005). Neither correlation nor VIF indicate that there is a multicollinearity problem for the current regression analysis.
8. For example, mean board size of sample companies used in Klein (2002) was 12; ours was 8 (see Table 2).

Appendix 1

An independent director is a non-executive director (i.e. is not a member of management) and:

1. is not a substantial shareholder of the company or an officer of, or otherwise associated directly with, a substantial shareholder of the company
2. within the last three years has not been employed in an executive capacity by the company or another group member, or been a director after ceasing to hold any such employment
3. within the last three years has not been a principal of a material professional adviser or a material consultant to the company or another group member, or an employee materially associated with the service provided
4. is not a material supplier or customer of the company or other group member, or an officer of or otherwise associated directly or indirectly with a material supplier or customer
5. has no material contractual relationship with the company or another group member other than as a director of the company
6. has not served on the board for a period which could, or could reasonably be perceived to, materially interfere with the director's ability to act in the best interests of the company
7. is free from any interest and any business or other relationship which could, or could reasonably be perceived to, materially interfere with the director's ability to act in the best interests of the company.

Source: Australian Stock Exchange, Corporate Governance Council, *Principles of Good Corporate Governance and Best Practice Recommendations*, ASX, 2003.

References

Ajinkya, B., Bhojraj, S. and Sengupta, P. (2005) The Association Between Outside Directors, Institutional Investors and the Properties of Management Earnings Forecasts, *Journal of Accounting Research*, 43, 343–376.

Anderson, R., Mansi, S. and Reeb, D. (2004) Board Characteristics, Accounting Report Integrity, and the Cost of Debt, *Journal of Accounting and Economics*, 37, 315–342.

Arfken, D., Bellar, S. and Helms, M. (2004) The Ultimate Glass Ceiling Revisited: the presence of women on corporate boards, *Journal of Business Ethics*, 50, 177–186.

Australian Stock Exchange, Corporate Governance Council (2003) *Principles of Good Corporate Governance and Best Practice Recommendations*. Sydney: Australian Stock Exchange.

Barnhart, S. W., Marr, M. W. and Rosenstein, S. (1994) Firm Performance and Board Composition: some new evidence, *Managerial and Decision Economics*, 15, 329–340.

Beasley, M. (1996) An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud, *The Accounting Review*, 71, 443–465.
Beasley, M., Carcello, J., Hermanson, D. and Lapides, P. (2000) Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms, *Accounting Horizons*, 14, 441–454.
Bernardi, R. A., Bean, D. F. and Weippert, K. M. (2002) Signaling Gender Diversity through Annual Report Pictures: a research note on image management, *Accounting, Auditing & Accountability Journal*, 15, 609–616.
Brennan, N. and McCafferty, J. (1997) Corporate Governance Practices in Irish Companies, *Irish Journal of Management*, 17, 116–135.
Brennan, N. and McDermott, M. (2004) Alternative Perspectives on Independence of Directors, *Corporate Governance: An International Review*, 12, 325–336.
Carter, D. A., Simkins, B. J. and Simpson, W. G. (2003) Corporate Governance, Board Diversity, and Firm Value, *The Financial Review*, 38, 33–53.
Chaganti, R. S., Mahajan, V. and Sharma, S. (1985) Corporate Board Size, Composition and Corporate Failures in Retailing Industry, *Journal of Management Studies*, 22, 400–417.
Chandler, M. (1975) It's Time to Clean up the Boardroom, *Harvard Business Review*, September–October, 73–82.
Cheng, S. (2003) Time to Revamp Insider Boards, *National Real Estate Investor*, 45, 72.
Coffey, B. S. and Wang, J. (1998) Board Diversity and Managerial Control as Predictors of Corporate Social Performance, *Journal of Business Ethics*, 17, 1595–1603.
De Andres, A. P. and Lopez, F. (2005) Corporate Boards in OECD Countries: size, composition, functioning and effectiveness, *Corporate Governance: An International Review*, 13, 197–210.
Dulewicz, V. and Herbert, P. (2004) Does the Composition and Practice of Boards of Directors Bear Any Relationship to the Performance of their Companies?, *Corporate Governance: An International Review*, 12, 263–280.
Dunn, P. (2004) The Impact of Insider Power on Fraudulent Financial Reporting, *Journal of Management*, 30, 397–412.
Engen, J. R. (2002) Scorecards on Governance: Are Banks Up to Par?, *Bank Director Magazine*, 4th Quarter, http://www.bankdirector.com/issues/2002_4/ (accessed August 19, 2005).
Field, A. (2005) *Discovering Statistics using SPSS*. London: Sage Publications Ltd.
Fields, M. A. and Keys, P. Y. (2003) The Emergence of Corporate Governance from Wall St. to Main St.: outside directors, board diversity, earnings management and managerial incentives to bear risk, *The Financial Review*, 36, 1–24.
Fombrun, C. J. (1996) *Reputation: Realizing Value from the Corporate Image*. Cambridge, MA: Harvard Business School Press.
Gilpatrick, K. (2000) Invite Youthful Insight, *Credit Union Management*, 23, 28–29.
Harrigan, K. (1981) Numbers and Positions of Women Elected to Corporate Boards, *Academy of Management Journal*, 24, 619–625.
Hillman, A. J., Keim, G. D. and Luce, R. A. (2001) Board Composition and Stakeholder Performance: do stakeholder directors make a difference?, *Business & Society*, 40, 295–314.
Hoffman, L. and Maier, N. (1961) Quality and Acceptance of Problem Solutions by Members of Homogeneous and Heterogeneous Groups, *Journal of Abnormal and Social Psychology*, 62, 401–407.
Hooghiemstra, R. and van Manen, J. (2004) The Independence Paradox: (im)possibilities facing non-executive directors in The Netherlands, *Corporate Governance: An International Review*, 12, 314–324.
Houle, C. O. (1990) Who Should be on your Board?, *Nonprofit World*, 8, 33–35.
Huse, M. and Rindova, V. P. (2001) Stakeholders' Expectations of Board Roles: the case of subsidiary boards, *Journal of Management and Governance*, 5, 153–178.
Hyland, K. K. and Marcellino, P. A. (2002) Examining Gender on Corporate Boards: a regional study, *Corporate Governance*, 2, 24–31.
Kiel, G. and Nicholson, G. (2003) Board Composition and Corporate Performance: how the Australian experience inform contrasting theories of corporate governance, *Corporate Governance: An International Review*, 11, 189–205.
Klein, A. (2002) Economic Determinants of Audit Committee Independence, *The Accounting Review*, 77, 2, 435–452.
Knight, A. (2004) Affirmative: the glass ceiling is still firmly in place, *Sydney Morning Herald*, 6 October.
Knippenberg, D., De Dreu, C. and Homan, A. (2004) Work Group Diversity and Group Performance: an integrative model and research agenda, *Journal of Applied Psychology*, 89, 1008–1022.
Lawrence, J. and Stapledon, G. (1999) *Do Independent Directors Add Value?* Melbourne: Centre for Corporate Law and Securities Regulation, University of Melbourne.
Luoma, P. and Goodstein, J. (1999) Stakeholders and Corporate Boards: institutional influences on board composition, Research Note, *Academy of Management Journal*, 42, 553–563.
Milliken, F. J. and Martins, L. L. (1996) Searching for Common Threads: understanding the multiple effects of diversity in organizational groups, *Academy of Management Review*, 21, 402–433.
Muth, M. and Donaldson, L. (1998) Stewardship Theory and Board Structure: a contingency approach, *Corporate Governance: An International Review*, 6, 5–28.
Park, Y. W. and Shin, H. H. (2003) Board Composition and Earnings Management in Canada, *Journal of Corporate Finance*, 185, 1–27.
Psaros, J. and Seamer, M. (2003) *Horwath 2003 Corporate Governance Report*, The University of Newcastle Business School.
Ripley, A. (2003) Equal Time, *Time Europe*, 162(11), www.time.com/time/europe/magazine.
Schippers, M., Hartog, D., Koopman, P. and Wienk, J. (2003) Diversity and Team Outcomes: the moderating effects of outcome interdependence

and group longevity and the mediating effect of reflexivity, *Journal of Organizational Behaviour*, 24, 779–802.

Siciliano, J. I. (1996) The Relationship of Board Member Diversity to Organizational Performance, *Journal of Business Ethics*, 14, 1313–1320.

Tian, J. J. and Lau, C. (2001) Board Composition, Leadership Structure and Performance in Chinese Shareholding Companies, *Asia Pacific Journal of Management*, 18, 245–263.

Vafeas, N. and Theodorou, E. (1998) The Relationship Between Board Structure and Firm Performance in the UK, *British Accounting Review*, 30, 383–407.

Watson, W., Kumar, K. and Michaelsen, L. (1993) Cultural diversity's impact on interaction processes and performance: comparing homogenous and diverse task groups, *Academy of Management Journal*, 36, 590–602.

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