NON-COMPLIANCE WITH AUSTRALIAN STOCK EXCHANGE RECOMMENDATIONS ON BOARD INDEPENDENCE

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Abstract

An agency theory perspective is adopted to explain the high levels of non-compliance with recommendations concerning board structure of the Australian Stock Exchange's (ASX) Corporate Governance Principles and Recommendations. The study compares groups of compliers and non-compliers drawn from members of the ASX All Ordinaries Index. The results indicate that, in the presence of mitigating factors such as less complexity, higher levels of managerial ownership of equity and higher ownership concentration, entities are less likely to comply with the recommendations on board independence. The results suggest that the compliance decision might be influenced by mitigating factors that reduce the need for board independence.

Keywords: Board Composition, Corporate Governance, Agency Theory, Corporate Governance Codes

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Introduction

The volatile markets and corporate collapses of the past decade have intensified debate about how entities are governed. Many countries have implemented codes of good governance particularly since the introduction in the United Kingdom of the Cadbury Code in 1992. By the middle of 2008, 64 countries had issued 196 distinct codes of good governance (Aguilera and Cuervo-Cazurra, 2009). The majority of these codes have voluntary compliance based on a rule of 'comply or explain' where entities are not required to comply with all recommendations but must explain reasons in cases of non-compliance.

Filatotchev and Boyd (2009:257) suggest "that analytic and regulatory approaches to corporate governance issues should move from a 'one-size-fits-all' template" and take into account organisational contexts. This study addresses this comment by investigating whether non-compliance by entities with the 'one-size-fits-all' approach adopted in many codes of good governance can be explained by the presence of mitigating factors. The study compares samples of entities which comply and samples of entities which do not comply with Australian Stock Exchange good governance recommendations on board independence. An agency theory perspective is adopted to determine whether the compliance decision is affected by the presence of firm characteristics that might mitigate the need for board independence.

Since 2003, Australian entities listed on the Australian Stock Exchange (ASX) have been required to report on their compliance or non-compliance with the ASX's *Principles of Good Corporate Governance and Best Practice Recommendations* and its successor *Corporate Governance Principles and Recommendations* (hereafter referred to as the 'guidelines'). Those choosing not to comply risk being shunned by investors (Nicholas, 2003). Yet despite the fact that the recommendations have been in place since 2003, the particular recommendations concerning board structure and independence have amongst the highest levels of non-compliance of all the recommendations in the ASX guidelines. This is of concern as the corporate collapses in Australia, including HIH and One. Tel, have spurred debate about

the actions of directors with their knowledge of the problems that existed being scrutinised (Donnan, 2001; Light *et al.,* 2002).

This study is motivated by the high level of non-compliance by listed Australian entities with what are espoused as 'best practice' governance recommendations concerning board structure and independence. In a survey of independent directors on the boards of the top 200 Australian companies, Brooks *et al.* (2009:168) report that '88% of respondents considered that the composition of the board sends important signals about the company values and stakeholder interest'. Entities which report their non-compliance with the recommendations risk being perceived as not following 'best practice' in corporate governance by shareholders, potential investors and other stakeholders. Therefore, it might be expected that they have compelling reasons for their non-compliance. This study investigates, from an agency theory perspective, possible reasons for non-compliance by entities with the ASX recommendations concerning board independence. In particular, the effect of specific firm characteristics on the choice to comply or not comply is investigated.

Agency theory suggests that entities which are less complex and have higher levels of ownership concentration and managerial ownership of equity may be less likely to have an independent board as these other factors may reduce the need for board independence. The results of this study are consistent with this assertion. Thus, while the ASX guidelines espouse board independence, there may be legitimate mitigating factors that influence the decision of entities when implementing the recommendations in the guidelines.

The study contributes to the existing literature on board composition and independence. Firstly, the study makes a significant contribution to the extant literature by using data from the fifth annual report after the introduction of the guidelines. Previous academic studies which discuss board independence from theoretical perspectives and which have been conducted 'in light of' the ASX guidelines (Bonn, 2004; da Silva Rosa *et al.,* 2004; Kang *et al.,* 2007; Linden and Matolcsy, 2006) use data from before the introduction of the ASX guidelines. This study therefore offers insight into the way reporting entities choose to structure their board in an environment where the ASX guidelines, and the requirement to report against them, are well established.

Secondly, the study addresses a gap in the literature by employing a comparison group design. Reporting entities must report whether they do or do not comply with a recommendation. This study separates entities that choose to comply with the recommendations concerning board independence from entities that choose not to comply and compares the two groups. Generally researchers investigating board independence have looked at a sample of entities as a whole and investigated if particular firm characteristics correlate with governance choices. For example a typical research question would be: does the number of independent directors decrease as ownership concentration increases? An extensive review of the literature did not identify any previous study which has used this comparison group approach with regard to ASX corporate governance guidelines. The results provide information which gives regulators and users of corporate governance information increased insight into the possible reasons for the high level of non-compliance with the recommendations on board structure.

The ASX Guidelines

In March, 2003 the ASX Corporate Governance Council released its *Principles of Good Corporate Governance and Best Practice Recommendations.* The guidelines are voluntary. However, ASX Listing Rule 4.10.3 requires listed entities to disclose in their annual reports the extent to which they have complied with the guidelines and, if they have not complied, to explain why. This is referred to as "if not, why not" reporting (ASX, 2003). After conducting monitoring activities, the Council reviewed the first edition of the principles and recommendations and, on 2 August 2007, released the second edition of the revised principles and recommendations (ASX, 2007a). A second edition of the 2007 principles and recommendations was released in 2010 (ASX, 2010a) and applies to listed entities from 1 January, 2011.

The 2003 guidelines espoused ten fundamental corporate governance principles with specific recommendations listed under each principle. The 2007 version revised the number of broad principles to eight. Zattoni and Cuomo (2008:4) suggest that "the core of codes of good governance lies in the recommendations on the board of directors". This study therefore concentrates on the second principle of the guidelines which concerns structuring the board to add value and promotes the establishment of an

independent board. Principle 2 has six recommendations on how to achieve best practice (ASX, 2010a). The recommendations are set out in Table 1 below.

Table 1. Recommendations Under Principle 2

No	Recommendation
2.1	A majority of the board should be independent directors.
2.2	The chair should be an independent director.
2.3	The roles of chair and chief executive officer should not be exercised by the same individual.
2.4	The board should establish a nomination committee.
2.5	Companies should disclose the process for evaluating the performance of the board, its committees and individual directors.
2.6	Companies should provide the information indicated in the Guide to reporting on Principle 2.

Source: Adapted from *Corporate Governance Principles and Recommendations with 2010 Amendments* (ASX, 2010a).

The annual reports used in this study were from June, 2007 and were prepared under the 2003 version of the guidelines.[8]

As part of its review and monitoring process the ASX conducts a yearly analysis of corporate governance disclosures made by listed entities. The ASX study into annual reports from 2007 (ASX, 2008) reports that 90.5 percent of the listed entities in the review complied with ASX Listing Rule 4.10.3 by either adopting the recommendations or using the "if not, why not" reporting option against the recommendations. By 2009 this number had increased to 93% (ASX, 2010b).

In addition to the rate of compliance with the ASX Listing Rule, the 2007 review looked at the rate of actual adoption of each recommendation. The 2009 review did not have the same detail in this regard but did contain some commentary on the rate of adoption. In 2007, three of the five recommendations with the highest level of non-compliance involve board independence. In the 2007 study, 45% of listed companies reviewed did not comply with Recommendation 2.1 concerning a majority of independent directors on the board. By 2009 48% percent of reporting entities did not comply with this recommendation. The 2007 study reported that 38% of listed companies did not have an independent chairperson (Recommendation 2.2). The 2009 review did not report on this figure. In 2007, 59% of companies had not established a nomination committee (Recommendation 2.4) and by 2009 this figure rose to 63% of reporting entities. In contrast, over 80% of the listed companies in the 2007 study did separate the role of chairperson and CEO (Recommendation 2.3). This figure was not reported in the 2009 review. These compliance rates suggest, then, that Australian entities adopt a variety of practices when it comes to board independence. The results also suggest that compliance with the recommendations concerning board composition and independence espoused in the guidelines has not increased over the years that the guidelines have been in existence. In fact compliance with some recommendations has decreased.

As noted, the ASX reviews are mainly concerned with compliance with ASX Listing Rule 4.10.3 and do not report in any detail the reasons offered by entities which do not comply with the recommendations. However, the various reviews have reported the reasons typically given for lack of independence of the board and consistently the reasons have included the 'size of the entity, the cost of independent directors or the need for relevant but not independent skills of directors' (ASX, 2010b:5).

This study proposes that other reasons may influence the compliance decision and investigates, from an agency theory perspective, possible reasons for non-compliance by entities with the ASX recommendations concerning board independence.

8 This study involves the first four recommendations of Principle 2: Structure the Board to Add Value. These recommendations have undergone no substantive changes since the 2003 guidelines. The findings of this study therefore remain relevant under the current version of the guidelines.

Theoretical Framework and Hypothesis Development

Agency theory and the determinants of board independence

Agency theory concerns the delegation of control in organisations and focuses on agency relationships within a firm where one party delegates the authority to make decisions to another party (Jensen and Meckling, 1976). The theory predicts that when an agency relationship exists, both parties will act in their own best interests to maximise their own wealth and, as a result, conflicts will occur. It is assumed that principals are aware of these potential conflicts and will introduce measures to control or mitigate agency conflict (Deegan, 2009; Dellaportas *et al.,* 2005; Drever *et al.,* 2007; Fama and Jensen, 1983a).

Agency conflicts can be controlled by implementing governance structures that control the decision-making processes in organisations. An effective system of decision making involves separating the management of decisions from the control of the decision-making process (Fama and Jensen, 1983b). This is achieved by having a board of directors with the power to employ, dismiss and compensate the top-level decision managers, to ratify and monitor important decisions and to preclude managers from being the main evaluators of their own performance and thereby providing a safeguard to invested capital (Baysinger and Hoskisson, 1990; Fama and Jensen, 1983b). Fama (1980:294) views the board as a 'market-induced institution, the ultimate internal monitor of the set of contracts called a firm, whose most important role is to scrutinize the highest decision makers within the firm.' The effectiveness of the board in controlling the decision-making process, and thereby controlling agency conflicts, will depend on the degree of independence the board has from management and it is suggested that independent directors be included as a form of 'professional referee' Fama (1980:293).

As well as the presence of independent directors, the chairperson should be an independent director (Carson, 2002; Jensen, 1993) and not be the CEO of the entity (Dalton and Kesner, 1987). Further, the establishment of a nomination committee to evaluate board performance and recommend appointment and removal of directors can play a role in adjusting the composition of the board to better control agency conflicts. By reducing managerial influence on the selection of new board members, nomination committees can help resolve the power asymmetry between boards and management (Ruigrok *et al.,* 2006; Vafeas, 1999).

The different aspects of board structure discussed above all aim to enhance board independence and the decision control process and therefore help to lessen agency conflict. The ASX guidelines recommend a majority of independent directors on the board, that the chairperson be an independent director, that the roles of chairperson and CEO not be shared by the same person, and that a nomination committee be formed. Each of these recommendations contributes to the level of independence of the board and is consistent with agency theory. However many Australian entities choose not to adopt these particular aspects in their governance arrangements. Despite the fact that the ASX guidelines have been in place since 2003, high levels of non-compliance still exist for some of the recommendations concerning board independence.

The literature relating to agency theory posits that an independent board is one mechanism that can be employed to reduce agency conflict. However there may be other mechanisms or firm characteristics that also reduce agency conflict and the presence of these mechanisms or characteristics may act as mitigating factors, reducing the need for board independence in managing agency conflict. Therefore board independence may not be imperative if other factors that reduce agency conflict are present in an entity and their presence may be a reason for non-compliance with the recommendations. The study attempts to explain these high levels of non-compliance by addressing the research question: Are there mechanisms or firm characteristics that substitute for board independence which may help explain an entity's non-compliance with ASX corporate governance recommendations?

To assess this research question three hypotheses are developed that relate to firm-specific characteristics which agency theory suggests may affect the level of independence of boards of directors. These characteristics are firm complexity, ownership concentration and managerial ownership of equity. Previous studies have investigated whether different mechanisms used to control agency conflict, such as managerial ownership of equity or monitoring by large shareholders, may act simultaneously in their effect on agency conflict and therefore become substitutes for each other. Other studies have looked at

particular firm characteristics (such as complexity) that may exacerbate agency conflict and therefore require the use of control mechanisms such as independent directors.

Complexity

As noted, the board is a mechanism for managing agency conflict by separating decision management from decision control (Fama, 1980; Fama and Jensen, 1983b). The complexity of the firm may impact on the importance of this separation of the decision process. In more complex organisations the information required in the decision process is likely to be more dispersed amongst various agents thus making the decision-making process more involved. A more complex decision-making process will require more control measures to be in place in order to mitigate agency conflicts (Fama and Jensen, 1983b).

A number of studies conducted on board composition and independence have used size as a proxy for complexity, arguing that large organisations are more likely to be complex. Rediker and Seth (1995) argue that decision management is likely to be more complex in larger organisations. They may, therefore, have a greater potential benefit from separating the decision process and appointing independent directors (Logan and Dunstan, 1999). Large firms are also likely to have less monitoring potential from concentrated share ownership since shareholders need to own a larger market value of shares to have an influence in a larger firm compared to smaller firms (Rediker and Seth, 1995). Entity size has therefore been included as a variable in several studies on board structure and independence but with mixed results.

In a study of 390 large manufacturing firms across ten industrial countries, (including a small sample from Australia), Li (1994) found that large firms do have more outside directors. From a New Zealand perspective, Prevost *et al.* (2002) investigated companies over a four year period and found that firm size was significantly, positively correlated with the number of outside directors. In Australia, Kiel and Nicholson (2003) analysed the boards of the top 500 Australian listed companies in 1996 and found that larger companies had larger boards and a greater proportion of outside directors. Da Silva Rosa *et al.* (2004) investigated 121 initial public offerings in Australia in 1994 and 1997. They found larger firms had more independent directors and also larger boards.

Other studies however have failed to find a significant connection between firm size and board independence. Bathala and Rao (1995), in a study of 261 United States firms in 1986, found that the size of the firm was not a significant determinant of the number of outside directors. In Australia, Logan and Dunstan (1999) looked at 191 companies from the All Ordinaries Index in 1991 and found that size was not a significant determinant of board independence or CEO/chairperson duality. However these two studies both involved entities that were already regarded as "large" and there may therefore have been some bias in the findings.

Based on this existing literature, it is predicted that less complex firms, proxied by size, will be less likely to comply with the guidelines than more complex firms. From this assertion, the first hypothesis is developed:

Hypothesis 1. Entities that choose not to comply with:
(a) Recommendation 2.1 that the majority of the board be independent directors;
(b) Recommendation 2.2 that the chairperson be an independent director;
(c) Recommendation 2.3 that the role of CEO and chairperson be separated; and
(d) Recommendation 2.4 that a nomination committee be formed
will be less complex than entities that choose to comply.

Ownership Concentration

Ownership concentration refers to the extent to which share ownership in an organisation is concentrated. Organisations where the shares are dispersed amongst many shareholders have diffuse ownership whereas organisations with a large proportion of shares owned by a smaller group of shareholders have more concentrated ownership. Many companies in the United States and United Kingdom are characterised by diffuse ownership of shares. However, Australia differs from these other Anglo-American countries in that the ownership of Australian listed companies is often more concentrated than in the United States and United Kingdom (Clarke, 2007; Farrar, 2005).

Shareholders who own a small proportion of equity in a particular firm have little ability or incentive to monitor and influence management individually. The necessity for others to monitor management is therefore expected to be greater in firms with more diffuse ownership (Li, 1994; Logan and Dunstan, 1999; Rediker and Seth, 1995). When ownership is concentrated, the owner has a much stronger incentive to monitor the management of the particular firm. Shareholders with large shareholdings may be able to influence and monitor management more effectively than shareholders with smaller holdings, perhaps by sitting on the board themselves or having a personal representative on the board. Accordingly, in entities with more concentrated ownership there may be a reduced need to have independent directors on the board to monitor the actions of management.

Previous literature has predominantly found this to be the case (Kang *et al.,* 2007; Li, 1994; Logan and Dunstan, 1999; Setia-Atmaja, 2009). Setia-Atmaja (2009), Kang *et al.* (2007) and Logan and Dunstan (1999) were all Australian studies and all found ownership concentration to be inversely related to board independence. Prevost *et al.* (2002) found that, contrary to previous findings, ownership concentration in New Zealand firms is positively related to the number of outside directors on boards. This is an unusual finding and the authors suggest it is related to the unusual corporate control market in New Zealand. Rediker and Seth (1995) report conflicting results when measuring the effect of ownership concentration on board independence. Contrary to their predictions, they found ownership concentration did have a significant, inverse association with the percentage of outside directors in large firms but not in small firms.

Finally, with regard to other aspects of board independence, Ruigrok *et al.* (2006) conducted a longitudinal study of 210 Swiss companies and found that companies with concentrated ownership are less likely to have a nomination committee. They argued from an agency theory perspective that in firms with concentrated ownership, shareholders with large shareholdings may directly monitor management and play a role in selecting new board members. Therefore, there may be less need for a nomination committee. It is therefore predicted that firms with concentrated ownership will be less likely to comply with the guidelines than firms with diffuse ownership. From this assertion, the second hypothesis is developed:

Hypothesis 2. Entities that choose not to comply with:
(a) Recommendation 2.1 that the majority of the board be independent directors;
(b) Recommendation 2.2 that the chairperson be an independent director;
(c) Recommendation 2.3 that the role of CEO and chairperson be separated; and
(d) Recommendation 2.4 that a nomination committee be formed
will have higher levels of ownership concentration than entities that choose to comply.

Managerial Ownership of Equity

One mechanism to alleviate agency conflict is to reward management with not only a fixed salary but some form of incentive payment tied to performance. The purpose of incentive payments is to align the interests of shareholders and management by motivating and rewarding managerial performance that adds value to the firm (Brickley *et al.,* 2005; Grossman and Hart, 1982; Jensen, 2005). Jensen and Murphy (1990) argue that it is not important how much CEOs are paid but rather how they are paid and that they should receive salaries, bonuses and stock options designed to provide rewards for good performance and penalties for poor performance. Jensen and Meckling (1976) suggest that, apart from incentive payments, increasing managerial ownership of equity can help to control agency conflicts. The greater the proportion of equity owned by management, the more management interests are aligned with shareholder interests and the more agency conflict is mitigated (Logan and Dunstan, 1999).

Bathala and Rao (1995) found an inverse relationship between the number of outside directors on the board and managerial ownership of equity and assert that a majority of outside directors is not necessarily optimal as firms use multiple mechanisms to control agency conflict. Other studies have also found a significant inverse relationship between managerial ownership of equity and outside directors on the board (Cotter and Silvester, 2003; Fernandez and Arrondo, 2005; Hermalin and Weisbach, 1988; Logan and Dunstan, 1999; Prevost *et al.,* 2002; Rediker and Seth, 1995).

In a study concerning factors affecting a firm's decision to form nomination committees, Vafeas (1999) found that as the percentage of managerial ownership of equity (defined by Vafeas as ownership of equity

by managers and directors) increases, the probability of a firm having a nomination committee decreases. This would suggest that managerial ownership of equity is a substitute mechanism for independence of the board. It is therefore predicted that firms with higher levels of managerial ownership of equity will be less likely to comply with the guidelines than firms with lower levels of managerial ownership of equity. From this assertion, the third hypothesis is developed:

Hypothesis 3. Entities that choose not to comply with:
(a) Recommendation 2.1 that the majority of the board be independent directors;
(b) Recommendation 2.2 that the chairperson be an independent director;
(c) Recommendation 2.3 that the role of CEO and chairperson be separated; and
(d) Recommendation 2.4 that a nomination committee be formed
will have higher levels of managerial ownership of equity than entities that choose to comply.

Research Design

Sample and data

The population used in this study is the ASX All Ordinaries Index which is comprised of the 500 largest entities listed on the Australian Stock Exchange by market capitalisation (hereafter "Top 500"). The hypotheses relate to a number of organisational attributes and the population needed to be sufficiently broad to provide variation in the observed levels of the attributes. The entities in the index vary considerably in size and in the attributes being investigated. Selecting from this population is consistent with prior Australian studies concerning board independence (Bonn, 2004; Carson, 2002; Kiel and Nicholson, 2003).

Data collection involved a two-step process. Initially, data was collected from the 2007 annual report for each organisation in the population. Information concerning compliance or non-compliance with the recommendations on board independence was obtained from the Corporate Governance Statement of the reports. A dataset was compiled, recording whether or not the entity complied with each of the four recommendations concerning board independence.

A comparison group design was used to test the three hypotheses. For each hypothesis, two independent groups were needed, one containing entities which comply with a particular recommendation, and one containing entities which do not comply. From the Top 500, four distinct groups were identified as follows: Group 1 - Top 500 which did not comply with Recommendation 2.1; Group 2 - Top 500 which did not comply with Recommendation 2.2; Group 3 - Top 500 which did not comply with Recommendation 2.3; and Group 4 - Top 500 which did not comply with Recommendation 2.4. A comparison group was also identified containing entities which complied with all of the four recommendations. Groups 1 to 4 are not mutually exclusive. Entities appear in more than one group if they do not comply with more than one of the recommendations. The comparison group is mutually exclusive from the other groups because it contains only entities which comply with all four of the recommendations.

Recommendations 2.1 and 2.2 both involve determining whether or not a director is independent. When deciding whether or not an entity complied with this recommendation, the definition of "independent director" contained in the ASX guidelines (ASX, 2003:20) was used. If an entity's definition of independence, as detailed in its corporate governance statement, differed from that of the ASX, the entity was eliminated from the sample. Some entities were unclear as to which directors were independent and which were not, making it impossible to determine if the chairperson was independent – these entities were also eliminated. Some trusts had a complicated system involving more than one board comprised of directors from the controlling entity. It depends on the particular business at hand as to which members sit at meetings. These trusts were eliminated because it was too difficult to determine if they complied with the recommendations and the corporate governance statements were not clear in this regard. One entity had a two-tier board system and was eliminated.

Recommendation 2.4 involves the formation of a nomination committee. An entity complies with this recommendation if it has formed a separate nomination committee or if it has formed a committee which performs the duties of a nomination committee in conjunction with other duties such as remuneration. However, if an entity stated that the full board performs the duties of a nomination committee, the entity

was deemed to not comply with the recommendation, as a separate committee does not exist. This classification is consistent with Ruigrok *et al.* (2006) but is less strict than Vafeas (1999) who only counted the existence of a nomination committee if its sole function was to nominate new directors. There were some annual reports that did not contain a corporate governance statement, usually those also reporting under the United States regime. Entities were also eliminated if their financial statements were not in Australian dollars. A small number of entities had no reports on the database. This left a total of 423 entities, the number of entities in each group is shown in Table 2 below:

Table 2. Number of Entities in Sub-populations

Group	Description	Number
Comparison	Total Compliers	143
1	Non-compliers with Rec 2.1	173
2	Non-compliers with Rec 2.2	150
3	Non-compliers with Rec 2.3	32
4	Non-compliers with Rec 2.4	162

From each of Groups 1, 2, 3 and 4 and the comparison group, a sample of 75 entities was randomly selected to form Samples 1 to 4 and a comparison sample. These sample sizes are sufficiently large to use parametric statistics in the analysis (Zikmund, 2003) and are consistent with previous studies where the method involved a comparison between different groups (Collett and Hrasky, 2005; Dalton and Kesner, 1987). There were only 32 entities in Group 3, non-compliers with Recommendation 2.3. Therefore, the sample group for this recommendation consists of 32 entities.

In the second stage of the data collection process, data for each of the explanatory and control variables were obtained from the annual reports of each entity included in the four sample groups and the comparison group.

Variables

Dependent Variable

The dependent variable gives an indication of whether the entity complies or does not comply with the recommendations and is a dichotomous variable (COMPLY). The variable takes the value of 0 if the entity belongs to the comparison sample of entities which comply with all four of the recommendations. In each sample of the non-compliers, the value of 1 will be assigned to the variable. Because Groups 1 to 4 are all different, the statistical testing will be conducted on each sample separately, thereby allowing the value of 1 to be used in each case.

Independent Variables

The independent variables represent firm characteristics which, consistent with agency theory, previous literature has suggested may affect the level of agency conflict and the level of board independence in a firm. These firm characteristics are complexity, managerial ownership of equity and ownership concentration. The characteristics, and the approaches to be taken in their measurement, are discussed below.

In this study, firm complexity is measured using size as a proxy. Size has been used as a proxy for complexity in many previous studies on board composition and independence (Bathala and Rao, 1995; Carson, 2002; da Silva Rosa *et al.,* 2004; Li, 1994; Logan and Dunstan, 1999; Prevost *et al.,* 2002). There are various methods for measuring entity size. Several studies on board independence have used total assets as a measure for size (Barnhart and Rosenstien, 1998; Christensen *et al.,* 2010; da Silva Rosa *et al.,* 2004; Davidson *et al.,* 2005; Prevost *et al.,* 2002). Other common measures for size include sales (Bathalo and Rao, 1995; Cheng and Firth, 2005; Dalton and Kesner, 1987; Li, 1994; Truong, 2006; Vafeas, 1999) and total revenue (Bonn, 2004; Cotter and Silvester, 2003; Kiel and Nicholson, 2003).

In the current study, total assets was used in the calculation of the measure for leverage (see discussion on leverage below) and was not used to measure size to reduce any potential multicollinearity amongst the independent variables. Instead, total revenue was used as a measure for entity size (SIZE*)*. Total revenue

was used rather than sales as the sample was selected from all listed entities in the Top 500 and some of the organisations are service organisations who earn income from a variety of sources, not only through sales.

Ownership concentration can be measured as the percentage of shares held by shareholders who hold a particular minimum percentage of equity, usually five percent (Anderson *et al.,* 2000; Christensen *et al.,* 2010; Logan and Dunstan, 1999) or the percentage of shares owned by the single largest shareholder (Davidson *et al.,* 2005; Ruigrok *et al.,* 2006). Another method for measuring ownership concentration is the percentage of shares held by the top twenty shareholders of the firm (Demsetz and Lehn, 1985; Kang *et al.,* 2007; Linden and Matolcsy, 2006; Prevost *et al.,* 2002; Truong, 2006). In Australia, ASX Listing Rule 4.10.9 requires listed entities to disclose their top twenty shareholders in their annual report. In this study ownership concentration (OWN*)* was measured using the percentage of shares owned by the top twenty shareholders of the firm. The higher the percentage, the more concentrated is the ownership of the organisation.

Managerial ownership of equity has typically been measured either by the percentage of shares held by management and "inside" directors (Cotter and Silvester, 2003; Hermalin and Weisbach, 1988; Logan and Dunstan, 1999; Mather and Ramsay, 2007; Vafeas, 1999) or as the percentage of shares held by management and the whole board (Barnhart and Rosenstien, 1998; Cheng and Firth, 2005; Ruigrok *et al.,* 2006; Truong, 2006).

In Australia, entities are required to include the shareholdings of key management personnel in their annual report under Accounting Standard AASB 124 - *Related Party Disclosures* (Australian Accounting Standards Board 2005). These key management personnel include "persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity" (AASB 124, para 9). In this study, managerial ownership of equity (MANGOWN) was measured using the total shareholdings of key management personnel as a percentage of the total equity of the entity.

Control Variables

Leverage and industry type have been included as control variables. These factors may influence the compliance decision but their affect is not clear. Previous research has suggested that leverage may affect board independence as the level of debt in a firm can affect agency conflict. However, the findings are inconclusive as various studies have yielded differing and conflicting results. Arguments put forward by Jensen (1986) and Grossman and Hart (1982) predict that debt will reduce agency conflict and one would expect to observe an inverse relationship between the level of debt in a firm and board independence factors such as the number of outside directors. Bathala and Rao (1995) predicted this relationship in their study of United States firms and found a significant inverse relationship between debt and outside directors. Prevost *et al.* (2002) also predicted an inverse relationship but actually found that the number of outside directors was positively related to debt leverage and therefore debt was not a substitute for board independence.

Other researchers have put an alternative interpretation on the effects of debt on agency conflict. Li (1994) explains that increased debt will often be used to finance external growth or to diversify and these activities would lead to an increased demand for additional expertise brought by outsiders. Logan and Dunstan (1999) also predict that as debt levels increase so will the number of outside directors on the board as management would have incentive to increase levels of monitoring to protect themselves from increases in the price of debt. They found this prediction to be confirmed with a significant positive relationship between leverage and the number of outside directors of the board. In this study, total liabilities to total assets will be used as a measure of leverage (LEV). This measure is consistent with Barnhart and Rosenstien (1998), Davidson *et al.* (2005), Linden and Matolcsy (2006), Mather and Ramsay (2007), Matolcsy *et al.* (2004), and Truong (2006).

Industry membership (IND) is also included as a control variable in this study. Prior research suggests that industry type may affect board independence as entities in certain industries may require directors with specialised knowledge (da Silva Rosa *et al.,* 2004). It is also suggested that entities in volatile industries with high political costs may use independent directors as a tactic to appear more legitimate to their stakeholders (Kang *et al.,* 2007). Consistent with previous studies (da Silva Rosa *et al.,* 2004; Kang

et al., 2007; Truong, 2006), industry membership will be characterised using the first level (sector) of the Global Industry Classification Standard (GICS). Organisations listed on the ASX have been classified using GICS since 2002.

Model

During analysis, univariate independent *t-tests* were conducted on the mean differences between compliers and non-compliers. However, multivariate regression analysis was undertaken as the primary test of the hypotheses. Previous research has suggested that different mechanisms used to control agency conflict, such as managerial ownership of equity or monitoring by large shareholders, may act simultaneously in their effect on agency conflict and therefore become substitutes for each other (Bathala and Rao, 1995; Rediker and Seth, 1995). Thus, the decision by an entity to comply or not comply with the recommendations may be influenced by a range of organisational factors.

A multivariate regression model was estimated which includes all of the independent variables and the control variables to determine if, collectively, the independent variables contribute to the decision to comply or not comply. Multinomial logistic regression techniques were used to estimate the model due to the dichotomous nature of the dependent variable. Thus the following model was estimated:

$$\text{COMPLY} = \alpha + \beta_1\text{SIZE} + \beta_2\text{OWN} + \beta_3\text{MANGOWN} + \beta_4\,\text{LEV} + \beta_5\text{IND} \quad (1)$$

Where:

COMPLY = Compliance with recommendation - 0 if comply, 1 if non-comply
SIZE = Size of the organisation, as measured by log of total revenue
OWN = Ownership concentration, as measured by percentage shares owned by top twenty shareholders
MANGOWN = Managerial ownership of equity, as measured by percentage of shares owned by key management personnel
LEV = Leverage, as measured by debt to total assets
IND = Value assigned for GICS industry membership classification

Results

The research question anticipated that, drawing on agency theory, there may be reasons for non-compliance with the ASX recommendations on board independence. It was predicted that non-compliers would be less complex, have more concentrated ownership and have a higher level of managerial ownership of equity than total compliers.

Descriptive statistics on these variables for each of the four recommendations are provided in Table 3. The results of univariate *t-tests* for mean difference between samples is also shown, with an indication of significance. Using univariate tests, non-compliers are significantly less complex (using size as a proxy) and have higher levels of ownership concentration and managerial ownership of equity than entities which comply with all of the recommendations. Differences in ownership concentration for Recommendation 2.3 concerning Chair/CEO duality were not significant. This may be due to the small number of non-compliers in this group.

Table 3. Descriptive Statistics and Univariate t-test of Mean Difference

	Rec 2.1 – Majority Independent Directors					Rec 2.2 – Independent Chair				
	Non-comply		Comply			Non-comply		Comply		
Variable	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference
Complexity (Size)	383.04	643.52	3632.66	7544.26	-3249.62****	393.41	890.42	3632.66	7544.26	-3239.26****
Ownership Concentration	70.70	19.80	61.84	18.69	8.86***	71.61	17.84	61.84	18.69	9.77****
Managerial Ownership of Equity	14.42	16.44	5.23	11.85	9.18****	15.12	17.22	5.23	11.85	9.89****
	Rec 2.3 – Separate Chair/CEO					**Rec 2.4 – Nomination Committee**				
	Non-comply		Comply			Non-comply		Comply		
Variable	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference
Complexity (Size)	425.90	1216.00	3632.66	7544.26	-3206.77***	313.06	609.71	3632.66	7544.26	-3319.60****
Ownership Concentration	66.16	18.56	61.84	18.69	4.33	67.09	20.96	61.84	18.69	5.25**
Managerial Ownership of Equity	14.66	17.03	5.23	11.85	9.43****	12.48	16.50	5.23	11.85	7.25****

Difference is significant at: * $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

The results of the multivariate analysis are reported in Table 4. The model was estimated using the four sample groups for each recommendation and the comparison sample.

Table 4. Logistic Regression Analysis of Non-Compliance with ASX Recommendations re Board Independence

	Rec 2.1 – Majority Independent Directors		**Rec 2.2 – Independent Chair**		**Rec 2.3 – Separate Chair/CEO**		**Rec 2.4 – Nomination Committee**	
Variables	β_1	Significance	β_2	Significance	β_3	Significance	β_4	Significance
H1: Complexity (Size)	-0.469	**0.000**	-0.510	**0.000**	-0.475	**0.001**	-0.599	**0.000**
H2: Ownership Concentration	0.023	**0.016**	0.026	**0.012**	0.008	0.294	0.011	0.143
H3: Managerial Ownership of Equity	0.037	**0.011**	0.038	**0.008**	0.033	**0.026**	0.029	**0.027**
Control: Leverage	0.346	0.699	1.053	0.267	0.676	0.620	1.122	0.258
Industry	-0.093	0.258	-0.075	0.387	-0.056	0.587	-0.153	0.077
Model Significance	χ^2	Significance	χ^2	Significance	χ^2	Significance	χ^2	Significance
Chi-square	47.103	0.000	50.640	0.000	26.753	0.000	54.296	0.000
Pseudo *R*-square (Nagelkerke)	0.359		0.382		0.314		0.405	

One-tailed tests except for leverage and industry.

Using size as a proxy for complexity, the results for Hypothesis 1 are significant and in the predicted direction for each of the four recommendations. Entities which are less complex are less likely to have a majority of independent directors, an independent chair, separate the roles of CEO/Chair or have a nomination committee. Hypothesis 2 predicted that entities with more concentrated ownership are less likely to comply with the recommendations. The results for this hypothesis are all in the predicted direction and are significant for the recommendations concerning a majority of independent directors and an independent chairperson. Therefore, the prediction that entities with higher ownership concentration are less likely to comply with the recommendations is supported for these two recommendations. The results for the other two recommendations were not significant. The findings for the recommendation concerning Chair/CEO duality may be the result of the small sample size of 32 entities. However, the findings for the recommendation concerning Chair/CEO duality and the recommendation concerning the formation of a nomination committee may be explained by the significant multicolliniarity between ownership concentration and managerial ownership of equity. Therefore, the hypothesis is rejected for Recommendations 2.3 and 2.4. Correlation matrices for the independent variables are presented in Table 5.

Hypothesis 3 predicted that non-compliers would have higher levels of managerial ownership of equity and the results for this hypothesis are all in the predicted direction and are all significant. The hypothesis is therefore supported for each of the four recommendations. Non-compliers have a significantly higher level of managerial ownership of equity than do entities which comply with the recommendations.

Table 5. Correlation Matrices for Continuous Independent Variables

	Complexity (Log Total Revenue)	Ownership Concentration	Managerial Ownership Equity	Leverage
Recommendation 2.1 - Majority Independent Directors				
Complexity (Log Total Revenue)	1			
Ownership Concentration	0.044	1		
Managerial Ownership Equity	-0.191*	0.229**	1	
Leverage	0.596**	-0.005	-0.112	1
Recommendation 2.2 - Independent Chairperson				
Complexity (Log Total Revenue)	1			
Ownership Concentration	-0.033	1		
Managerial Ownership Equity	-0.200*	0.204*	1	
Leverage	0.554**	-0.096	-0.098	1
Recommendation 2.3 - Chair/CEO Duality				
Complexity (Log Total Revenue)	1			
Ownership Concentration	0.019	1		
Managerial Ownership Equity	-0.205*	0.264**	1	
Leverage	0.652**	-0.176	-0.101	1
Recommendation 2.4 - Establish a Nomination Committee				
Complexity (Log Total Revenue)	1			
Ownership Concentration	0.051	1		
Managerial Ownership Equity	-0.138	0.259**	1	
Leverage	0.639**	-0.003	-0.142	1

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Discussion and Conclusions

This study argues that the presence of certain organisational characteristics may reduce agency conflict within organisations with the result that it may not be as necessary to use other control mechanisms, such as the inclusion of independent directors on the board. Different control mechanisms may act as substitutes for one another (Rediker and Seth 1995; Bathala and Rao 1995). The results suggest that complexity, proxied by size, does affect the compliance or non-compliance of entities with the recommendations. Agency theory asserts that there is less need for measures to control agency conflict in organisations which are less complex and these findings are consistent with this assertion. Less complex entities are less likely to comply with the recommendations on board independence.

Further, agency conflict can be mitigated by having a high level of ownership concentration as shareholders with large shareholdings are able to exert influence within the entity. The results show that entities with a high level of ownership concentration are significantly less likely to comply with the recommendations concerning a majority of independent directors and an independent chairperson, indicating that ownership concentration may act as a substitute for board independence in mitigating agency conflict. However, this was not the case for the recommendations concerning chairperson/CEO duality and formation of a nomination committee.

Agency conflict may also be controlled when managers are owners of equity. As their interests are aligned with the interests of the shareholders, there may then be less need for other measures that control agency conflict. The results support this assertion. Non-compliers have significantly higher levels of managerial ownership of equity than do entities which totally comply with all of the recommendations. The results of this study therefore suggest that complexity, ownership concentration and managerial ownership of equity are acting as substitutes for board independence in the control of agency conflict and this might affect an entity's decision to comply with the code recommendations concerning board independence.

The results of this study have practical implications for shareholders, investors, regulators and other users of corporate governance information. The ASX guidelines advocate board independence as a way of achieving good corporate governance. Entities choosing not to comply with the recommendations risk being shunned by investors for not following 'best practice'. Non-compliance can therefore be costly. However, in Australia the talent pool of experienced people who can act as independent directors is limited. There are added layers of costs and administration needed to operate with larger boards and recruiting independent directors is also costly. These costs can be prohibitive for smaller organisations.

The levels of non-compliance with the recommendations on board independence in Australia remain high despite the requirement to report against the ASX guidelines having been introduced in 2003. There may be mitigating factors which affect an entity's compliance decision. The ASX has acknowledged that company size may affect an entity's ability to comply with its recommendations (ASX, 2007b). However, board independence is only one way of achieving good governance and safeguarding shareholders' interests. An acknowledgement that other mitigating factors may affect an entity's compliance with the recommendations concerning board independence may be needed.

Limitations and future research

As with any empirical study, the results must be considered in light of its limitations. A future study could be expanded beyond the Top 500 as the guidelines and ASX Listing Rule 4.10.3 apply to all listed entities. To take full account of the range of organisational characteristics of interest, a sample including entities from outside the Top 500 may produce more generalisable results.

Another limitation of the current study is that it does not account for any potential interplay between the recommendations. For example, firms that have the same individual acting as chairperson and CEO may be more or less likely to have a majority of independent directors or a nomination committee. Also, the study did not investigate the actual independence of directors. If an entity stated that a director was independent according to the ASX definition then this claim was not investigated further and the director was taken to be independent

This study considers only the effect of complexity, ownership concentration and managerial ownership of equity on compliance with the recommendations on board independence. It does not investigate the implications of board composition and independence on the performance of the entity and draws no conclusions as to whether an independent board adds value to the firm and shareholders. It also does not investigate whether the particular firm characteristics of complexity, ownership concentration and managerial ownership of equity do, in fact, reduce agency conflict.

Future research opportunities arising from this study include replicating the study using a much larger sample size including entities from outside the Top 500 and investigating the interplay between the recommendations, as suggested above. A study could also be conducted, using the same comparison group approach, which investigates the effects of compliance or non-compliance on firm performance. Do entities which comply with all of the recommendations on board independence perform better than the non-complying entities? The results of such a study may lend to support to the notion that if other mitigating factors are present in an entity, an independent board may not be as imperative.

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