

# The Market Effects of CEO Turnover in Australian Firms

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We examine the relationship between the monitoring of CEO's by inside and outside directors and CEO turnover in the Australian market. Australian board structures and mechanisms are more similar to those in the U.S./U.K but market activity characteristics are more similar to Japanese/German systems. The results suggest that there is a relationship between CEO turnover and lagged performance rather than current performance as found in the U.S. In addition, non executive directors and independent directors are more likely to monitor management. However, there is a size effect as the results are driven by large firms. The difference in the results may be due to differences in the behaviour of United States and Australian institutional stockholders in solving corporate governance issues. Furthermore, a negative lagged market reaction is found on the announcement of the CEO change. However, the reaction is driven by a sub sample of firms with non independent boards and prior positive performance that may proxy for retirements.

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## **1. Introduction**

An efficient corporate governance system characterises a multiplicity of mechanisms to ensure that the interests of stockholders are protected against the agency behaviour of managers. One key mechanism of various corporate governance systems around the world, is the board of directors. It is argued that the major role of a typical board is the monitoring of managerial actions and thus the optimisation of corporate performance and maximisation of stockholder wealth. An important mechanism whereby boards discipline management, is the threat of removal or actual dismissal of poor performing management. Thus, by acting as monitors and as a disciplining mechanism, boards can significantly influence corporate policies and in case of failure, take corrective action by the removal of inefficient management.

Prior studies have examined the relationship between the monitoring role of boards and poor performance related CEO turnover in the United States (U.S.), Japan, Germany and the United Kingdom (U.K.). Although, it is commonly reported that poor corporate performance is associated with CEO turnover, there are significant differences among these countries in terms of the sensitivity of CEO turnover to performance, as well as, the time lag between poor performance and removal of the CEO. In addition, there are significant differences as to the influence that various board characteristics may have on the performance-turnover relationship. In the U.S. and the U.K, poor performance seems significantly related to CEO removal. The U.S. and the U.K. tend to have similar board structures and governance practices, as well as similar market transparency and depth. In contrast, the poor performance-CEO (president) turnover relationship is not very strong for German (Japanese) systems of governance. However, the explanation of the reported asymmetry is not clear. The logical question that arises is whether it is differential board structures and governance mechanisms or the differences in the market's objectivity in evaluating corporate performance, that explains the turnover-performance relationship differences in Anglo-Saxon and German/Japanese systems.

The purpose of this paper is to investigate the turnover-performance relationship asymmetry by examining the relationship between CEO turnover and poor corporate performance for a sample of Australian firms. The Australian corporate system offers a unique environment to address this question. Australian firms have board structures and mechanisms that are similar in design to the Anglo-Saxon boards and are in contrast to German/Japanese boards. However, in contrast to the U.S. and the U.K., the Australian market for corporate control is not as active and its effectiveness in inducing boards to be strict monitors and take corrective action in case of failure, may not be comparable to the U.S. and the U.K. In addition, Australia is characterised by a small and less active market than the large, deep and active U.S. and U.K. markets. The investigation of the Australian corporate governance system may help us differentiate between the role of market specific factors versus governance characteristics in determining the corporate performance-CEO turnover relationship.

The results of our analysis indicate that there is a relationship between CEO turnover and poor performance. However, in Australia poor performance has a lagged effect on CEO turnover in comparison to the U.S. and U.K. where current performance effects CEO turnover. In addition, we find that while board independence does positively influence the sensitivity of CEO turnover-performance relationship, the result only holds for large firms. In terms of the CEO turnover-performance relationship, our results seem to be more in line with those reported for Japanese/German firms.

The paper proceeds as follows. In the next section we provide a brief overview of comparative corporate governance practices in the U.S, U.K., Japan, Germany and Australia. In section 3, we review previous research on the issue of corporate performance-CEO turnover relationship. Section 4 contains our data and methodological approach. In section 5 we describe and discuss our results and section 6 concludes the paper.

## **2. Corporate Governance and Board Structure in the U.S., Japan, Germany, the U.K. and Australia**

Corporate governance systems vary across international markets. Kaplan (1994) argues that the U.S. corporate governance system is generally characterised as market oriented or “short term” stockholder oriented whereas the Japanese and German systems are characterised as relationship oriented systems. In the U.S., several internal and external mechanisms provide incentives for managers to maximise stockholder wealth. Managers are monitored by institutional and large stockholders, there is an external market for corporate control, boards of directors are usually dominated by outsiders and top executives have equity ownership. In comparison, in Japan and Germany, managers are monitored by a combination of banks, large corporate stockholders and other inter corporate relationships which are maintained over long periods of time. In addition, the external market for corporate control is small.

An important feature of the German system is the requirement by law for a two tier board. The management board is appointed by and reports to the supervisory board. The management board typically receives a five year contract from the supervisory board and runs the firm unless dismissed for cause by the supervisory board. Kaplan (1994a) argues that the chairman of the management board is considered to be the first among equals rather than the first among lessors usually associated with US chief executive officers. In principle, the supervisory board performs a function similar to that of outside directors but board members are not appointed by or dominated by CEOs. The board consist of both capital owners (banks) and employees. In addition, banks possess the privilege of proxy votes and exercise considerable influence on governance and management. The stock markets are thinly traded and there is a prevalence of ownership stock firms by other firms<sup>1</sup>. In addition, stock ownership of large German firms is more concentrated than ownership of large U.S. firms.

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<sup>1</sup> John and Senbet(1998).

In Japan, equity ownership by management is considerably less than in the U.S., large stockholders are sometimes viewed as passive and the proportion of outside directors on the board is lower.<sup>2</sup> The majority of directors of Japanese firms are long term employees and have been on the board for a substantial length of time.<sup>3</sup> Directors are elected at a stockholders meeting for not more than two years and the highest ranking member is the president. A majority of firms also have a chairman who is usually a former president. The president of a Japanese firm is not necessarily comparable to the U.S. CEO as Japanese chairmen commonly have CEO powers. A comparable group may be that of the top several executives in both countries. In Japan, this group is comprised of representative directors who have the legal right to represent the firm. While the president is always a representative director, the chairman may not be. Japanese corporate governance tends to be more consensus oriented and less CEO dominated than in the U.S.

In the U.S., board members are elected by stockholders for terms of 1 to 3 years. The board is responsible for choosing, compensating, monitoring, and if necessary, firing the top management team. Mace (1986) and Lorsch and MacIver (1989) argue that the board is dominated by the CEO who takes a lead role in setting the board's agenda and choosing new directors. U.S. boards have various combinations of current and retired executives and non executives rather than a corporate hierarchy around and below the CEO. Directors are classified as inside directors (executive and other non-independent directors) and outside (independent) directors. Directors are classified as outside directors if they neither work for the firm nor have extensive dealings with the firm. Employees are classified as inside directors.

Australian board members can be classified into two broad categories, executives and non executives.

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<sup>2</sup> Kaplan (1994) finds outside directors in 41.2% of the firms in his sample.

<sup>3</sup> Kang and Shivdasani(1995).

While the executives are employees of the firm, the non executives can be further classified into two categories, independent and non independent. For monitoring purposes, the most effective directors are the ones that are independent non executives. The Bosch (1993) report defines independence as the director not being a substantial stockholder, not being an ex-employee, not being retained as a professional adviser (either individually or through his/her firm) to the firm, not being a significant supplier or customer to the firm and overall having no significant contractual relationships with the firm.

Australian initiatives in the area of corporate governance have been limited until 1990. Uniformly accepted standards were not evident in the Australian business community, although a number of professional and business associations had adopted their own code of corporate governance. The Bosh (1993) report suggested principles of corporate governance to be applied in Australia. Although it called for firms to adhere to the principles and disclose this in their annual reports, compliance was voluntary. These principles included boards comprising of a majority of non executive directors with an appropriate mix of skills and experience and the appointment of an audit committee with a majority of non executive directors. From July 1996, the Australian Stock Exchange formalised a disclosure requirement for firms to include in their annual report, “a statement of the main corporate governance practices that the entity had in place during the reporting period”. In contrast, in the U.S. certain corporate governance procedures are regulated. In the U.K., it is mandatory for all public firms listed on the London stock exchange to disclose compliance with the Cadbury(1992)<sup>4</sup> report recommendations and explain non compliance.

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<sup>4</sup> Refers to the commission chaired by Sir Adrian Cadbury entitled “The Financial Aspects of Corporate Governance”.

### 3. Prior Evidence

One of the problems in empirically measuring the effectiveness of corporate governance, is that some aspects are not quantifiable. Often the only signal to the general market as to the existence of a governance problem at a firm, is the removal of the CEO. Therefore, one of the key reasons for examining CEO turnover in a corporate governance context, is that it is visible and usually the end product of corrective action.

In general, the U.S. evidence finds a negative relationship between top executive turnover likelihood and firm performance. These studies include the earlier studies that focus on the relationship between stock and earnings performance and CEO turnover (Warner, Watts and Wruck (1988) and Weisbach (1988)), the examination of performance pay and top management incentives (Jensen and Murphy (1990)), the examination of the relative performance evaluation for CEOs (Gibbons and Murphy (1990)), the examination of management turnover and financial distress (Gilson (1990)), the examination of accounting performance around management turnover (Murphy and Zimmerman (1993)), the examination of accounting performance and internal performance evaluation in Texas banks (Blackwell, Brickley and Weisbach (1994)), the examination of CEO turnover and outsider succession (Borokhovich, Parrino and Trapani (1996) and Parrino (1997)), the examination of the relationship between takeover activity and management turnover (Mikkelsen and Partch (1997)) and the documentation of changes in the turnover performance relationship over time (Denis, Denis and Sarin (1997)).

Warner, Watts and Wruck (1988) show that poor performance is associated with CEO turnover and find an inverse relationship between the probability of a top management change<sup>5</sup> and the firm's stock performance. In addition, they find that the average announcement effect of the management change is

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<sup>5</sup> Top management is defined as individuals holding the title CEO, president or chairman of the board.

zero. They argue that the zero abnormal return could have reflected the positive effect of the change (as the change was in the stockholders' best interests) being nullified by the bad news about management's poor performance (and perhaps the future effect on the firm). They suggest that the announcement of a change in CEO may be good news for some firms and bad news for the others, thus for the overall sample, the average effect may be zero.

Weisbach (1988) extends Warner, Watts and Wruck (1988) by linking the performance-management turnover relationship to board composition. He examines the relationship between the monitoring of CEOs by inside (executive and other non independent) directors and outside (independent) directors. Weisbach suggests that the task of evaluating senior management and replacing them for failure to perform, is likely to fall mainly on outside directors. He argues that inside directors' careers are tied to that of the CEO and hence insiders generally are unwilling to remove incumbent CEOs. Weisbach suggests that outside directors will have the incentive to ensure the effective running of a firm in order to protect their reputations in the market. However, he argues that insiders can add value to a board as they can improve the decision as to CEO successors. Inside board members are often potential CEOs. Their inclusion on the board provides them with valuable experience and allows outside board members an opportunity to evaluate potential CEO candidates. Weisbach suggests that boards combining inside and outside directors should be more effective in management replacement following poor performance.

Similar to Warner, Watts and Wruck (1988), Weisbach finds that a poor stock return increases the probability of a CEO losing his/her job. Weisbach finds that the relationship between firm performance and the likelihood of CEO turnover is stronger at firms with outsider dominated boards than firms with insider dominated boards. The results support the monitoring hypothesis that independent directors are more effective monitors. Weisbach concludes that boards react quickly to poor performance to replace a CEO and that the results are not affected by different ownership structures, firm size or industry.

In contrast to Warner, Watts and Wruck, Weisbach finds that the excess returns at the announcement of a CEO change are generally positive. The significance of this result varies depending on the event window used and the board classification. Overall, the announcement effect is positive for outside and mixed boards, while close to zero for inside dominated boards. Weisbach concludes that the results for outside boards is consistent with the hypothesis that outside directors act in the best interest of stockholders and improve the firm's value by removing poor CEOs. Weisbach argues that the positive mixed board result is consistent with the argument that mixed boards are often used to train and evaluate future CEOs.

Borokhovich, Parrino and Trapani (1996) extend Weisbach (1988) by investigating how director incentives affect the likelihood that a new CEO is hired from outside the firm. They argue that for reputational reasons, directors will choose the best candidate for CEO regardless of whether the potential CEO is an insider or an outsider. In contrast, inside directors are likely to prefer inside candidates as they themselves are generally the leading candidates. Additionally, an insider is less likely to substantially alter firm policies and inside appointments tend to be followed by less turnover among senior management.

However, Borokhovich, Parrino and Trapani (1996) use a simple director classification method, executives are insiders and all other directors are outsiders<sup>6</sup>. This definition is not ideal and makes it difficult to compare the results with previous studies which have used a more robust director classification. Borokhovich, Parrino and Trapani (1996) find that the likelihood of an outside executive being hired increases monotonically with the percentage of outside directors. Consistent with Weisbach (1988), they find a positive announcement effect for the news of a CEO change. Moreover, they find a significant positive abnormal return when an outsider is appointed CEO following forced or voluntary turnover compared to a large negative return when an insider replaces the fired CEO. Thus the results indicate that

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<sup>6</sup> They ignore all potential business relationships which could affect director motives due to the difficulty of obtaining enough accurate information about directors in the early years of their sample.

when choosing a new CEO, outside directors act in the best interest of stockholders.

Mikkelson and Partch(1997) extend the earlier turnover studies by examining whether the effectiveness of corporate governance suffers when the market for corporate control becomes less active. They compare top management turnover in acquired U.S. industrial firms during an active takeover market and a less active takeover market. They find that, after controlling for various determinants of management turnover<sup>7</sup>, turnover and performance are only related in the active takeover period and argue that takeover activity affects the intensity of managerial discipline.

Denis, Denis and Sarin(1997) document changes in the turnover performance relationship over time. They examine the relationship between turnover and various aspects of corporate governance. They find that ownership structure significantly affects the likelihood of change in top executives. The probability of top executive turnover is negatively related to the ownership stake of officers and directors and is positively related to the presence of an outside blockholder. The likelihood of a change in top executive is significantly less sensitive to stock price performance in firms with higher managerial ownership. In addition, top executive turnover is preceded by unusually high incidences of corporate control activity regardless of the level of managerial ownership.

There have been similar studies for Japan, Germany and the U.K. Table 1 provides a comparison of the international results.

[Insert Table 1 here]

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<sup>7</sup> These include directors stockholding, age of CEO, board size and proportion of outside directors.

Kaplan (1994) and Kang and Shivdasani (1995) examine management turnover in Japanese firms. Kaplan's results do not show a significant relationship between stock performance and president turnover. Kaplan argues that the results suggest that it is standard for Japanese presidents to resign their presidencies at regular intervals without regard to firm performance. This is consistent with the president becoming chairman after resignation. However, non standard turnover is significantly negatively related to lagged stock price performance but not current performance. For a comparative sample of U.S. firms, Kaplan finds that the coefficients of stock returns in the current period are significantly different between U.S. and Japanese firms. Kaplan argues that this suggests that CEO turnover in the U.S. is more sensitive to stock performance than Japanese presidential turnover. In Japan, representative director turnover is also negatively significantly related to lagged stock performance. Kaplan concludes that the fortune of Japanese top executives overall appears to be less closely tied to stock performance than those of U.S. executives.

Kang and Shivdasani (1995) extend and support Kaplan (1994) in finding a negative relationship between non routine top executive turnover likelihood and firm performance for Japanese firms. The effect of firm performance on routine turnover likelihood is small. In comparison, varying stock performance from the bottom to the top decile, significantly increases the likelihood of non routine turnover. Further, they find that firms with ties to a main bank are more likely to remove top executives for poor earnings performance than firms without ties to a main bank. There is also evidence of a marginally stronger relationship between stock price performance and non routine turnover for firms with high levels of block ownership. However, keiretsu membership or the presence of outside directors on the board does not have an effect on the sensitivity of turnover to stock price performance.

Kaplan (1994a) examines German firms and finds that turnover of the management board is significantly negatively related to current and lagged stock price performance. However, the turnover of the chairman is not significantly related to poor stock performance. The results are similar to Kaplan (1994) who finds that turnover of the top three to five executives (representative directors) in Japanese and (executive

directors) in US firms is significantly related to stock returns.

Cosh and Hughes(1997) examine CEO turnover of firms in the electrical engineering sector in the UK. They find a significant negative relationship between relative<sup>8</sup> stock performance and CEO turnover but do not find a relationship for lagged returns. The probability of dismissal increases, the lower the relative stock returns in the last financial year in which a dismissed CEO is in office.

Overall, it appears that the U.S. and the U.K. are similar in terms of corporate governance effectiveness in ensuring the corporate performance-CEO turnover link. There appears to be a strong negative relationship between the probability of CEO removal and corporate performance and the time lag for the turnover to take effect is relatively small. In comparison, in Japanese and German corporate markets, it is lagged performance that is significantly negatively related to the removal of president and management boards respectively. The question is whether it is the difference in market effectiveness or the difference in board structure, that explains the asymmetry of the relationship between turnover and performance between Anglo-Saxon and Japanese/German systems. A logical way to isolate the two factors is to investigate a system that has market activity characteristics similar to Japanese/German systems and a board structure mechanism similar to Anglo-Saxon systems. Australia offers an ideal experimental setup where board structure is more similar to the U.S./U.K. while the functioning of stock and corporate control markets is more similar to Japan/Germany.

#### **4. Data Description and Methodology**

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<sup>8</sup>Return is measured as the total stockholder return for the firm less the median total stockholder return for the sample.

The sample includes 93 of the top 150 listed public firms in Australia as of April 1996. The composition of the board of directors of the firms over the 1989-1995 period is ascertained from their annual reports.

Firms are excluded if they are

- a) not traded on the ASX (Australian Stock Exchange) for the full period between June 1989 and July 1995; or
- b) listed property trusts.

The announcement date of the CEO change is the date of the firm's market release to the ASX. Firms are required to make an announcement to the ASX before any information is provided to the media. Stock price and market index ( All Ordinaries Accumulation Index) data are obtained from the Australian Stock Exchange (ASX) database

Four firms are removed from the sample, two due to takeovers, one due to a merger and one due to its withdrawal from trading on the ASX. Thus the sample consists of 89 firms over the period July 1989 to June 1995 during which there were 77 CEO changes. Out of the 77 announcements for 89 firms in the sample, only 59 announcements are analysed. Two events are removed as there is no clear announcement date (or the actual announcement/release is missing), one is due to a period of no trading/removal of listing on the exchange before the change and 15 are removed because of contaminated announcements, that is, simultaneous information released with the CEO change announcement.

We classify directors as non independent if they were current or ex-employees, had business dealings with the firm, or were related (by family) to management directors. Directors are classified as executive if they are employees of the firm. Table 2 describes the make-up of Australian boards over 1989 to 1995.

[Insert Table 2 here]

The evidence suggests that the make-up of Australian firm boards is improving as compared to best-practice theory and empirical evidence (such as the findings of Byrd and Hickman (1992)). The average proportion of executives and non independent directors has dropped, and the proportion of independent directors has risen over 1989-1995. To provide an international comparison, the size of the board and the percentage of executives, insiders and outsiders of the board is compared to Japanese, U.S. and German boards<sup>9</sup>. Australian boards had an average size of 8.5 directors compared to 23, 14.9 and 25 (management and supervisory) directors for Japanese, U.S. and German boards respectively<sup>10</sup>. Australian boards were composed of 33.2% executives compared to 18.8%, 30.8% and 29.9% for Japanese, U.S. and German boards respectively<sup>11</sup>. In addition, outsiders comprised 30.8% of Australian boards compared to 3.2% and 64.3% for Japanese and U.S. boards.<sup>12</sup> Figure 1 provides a graphical comparison.

[Insert Figure 1 here]

Table 3 presents the characteristics of the CEO changes.

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<sup>9</sup> The Australian data is measured at 1989. Kaplan (1994) reports percentages for Japanese and U.S. boards at 1980 and Kaplan (1994a) reports percentages for German boards at 1983.

<sup>10</sup> The difference in size between Australian and Japanese, U.S. and German boards is significant at the 1% level.

<sup>11</sup> The difference in the percentage of executives on the board between Australian and Japanese boards is significant at the 1% level. There is an insignificant difference between Australian and U.S. and Australian and German boards.

<sup>12</sup> The difference in the percentage of outsiders on the board between Australian and Japanese firms and Australian and U.S. firms is significant at the 1% level.

[Insert Table 3 here]

Panel A describes the characteristics of the outgoing CEO and his/her replacement. The average Australian outgoing CEO is of similar age to US CEOs<sup>13</sup> (56 and 58 years old respectively) but are younger than Japanese CEOs (65 years old).<sup>14</sup> Australian CEOs had a similar average tenure to Japanese CEOs (6 and 5.4 years respectively) compared to a higher tenure of U.S. and German CEOs<sup>15</sup> (7.2 and 9 years respectively). An Australian CEO was employed on average for 22 years in the firm compared to 26 years for U.S. CEOs and 34 years for Japanese CEOs. In addition, the outgoing Australian CEO was a director on the board for an average of 10 years. In comparison, the incoming Australian CEO had an average age of 50, an average tenure as a director on the board of 3.3 years and was employed on average for 17.9 years in the firm.

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<sup>13</sup> Kaplan (1994).

<sup>14</sup> Kaplan (1994). Kang and Shivdasani (1995) report an average age of 62 and average tenure of 7.4 years.

<sup>15</sup> Kaplan (1994a).

Panel B provides details of the number of CEO changes per year, the number of CEOs appointed chairman and the number of outsiders that replaced the outgoing CEO. For the Australian sample, the outgoing CEO was appointed chairman in 30% of the firms where data was available (65% of the sample). In comparison 64% of Japanese presidents<sup>16</sup> and 16% of U.S. CEOs stayed on as chairman<sup>17</sup>. The incoming CEO was an outsider in 38% of the firms for which data was available (65% of the sample) compared to 10% for Japanese firms and 15% for U.S. firms<sup>18</sup>. An Australian inside replacement had been a director for 2 years on average and an employee for 11 years on average. Figure 2 provides a graphical comparison.

[Insert Figure 2 here]

We relate turnover to performance measures to test if poor performance increases the likelihood of CEO replacement. Further, we test whether non executive and independent (outside) boards monitor the management more effectively than executive and non independent (inside) boards and compare the size of the effects across boards. We utilise a multivariate logit regression framework to estimate the probability of a CEO change as determined by performance.

The dependent variable is an indicator variable that captures the change in the CEO. The variable equals one if there is a change in CEO and equals zero otherwise. The set of independent variables consists of a market adjusted return measure and dummy variables that describe the composition of the board. Two return measures are used. Current return is the return of the firm's stock less the return on the market index for the four quarters prior to the quarter in which the CEO change is announced. Lagged return is the return of the firm's stock less the return on the market index for the fifth to eight quarter prior to the

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<sup>16</sup> Kang and Shivdasani (1995). Kaplan (1994) reports an average percentage of 68.5%.

<sup>17</sup> Kaplan (1994).

<sup>18</sup> Parrino(1997).

quarter in which the CEO change is announced. The market performance adjustment is aimed at isolating any overall market induced shocks to the firm's performance<sup>21</sup>.

The dummy variables used to describe the composition of a firm's board of directors are  $D_{\text{Non Executives}}$ , a dummy variable equal to one if the board consists of greater than 50% of non-executive directors and  $D_{\text{Independent}}$ , a dummy variable equal to one if the board consists of greater than 50% of independent directors.

Similar to Weisbach (1988), dummy variables are multiplied by the return variable to examine the interactive effects. The product variables represent the probability that a particular board type will remove a CEO due to the level of the firm's performance. In addition, we examine the effect of the announcement of the change in CEO on the firm's stock price using the standard event study methodology developed by Brown and Warner (1980,1985).

A number of hypotheses are tested. Firstly, that there is an inverse relationship between prior performance and the probability of CEO turnover, as poor stock price performance should lead to a CEO change. Secondly, that non executive boards are more likely to monitor and remove managers for poor performance. Thirdly, that independent directors are more likely than non independent directors to remove a CEO for poor performance.

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<sup>21</sup> An adjustment of the market return by each firm's beta was considered. However, it can be argued that the evaluation of managers for corporate governance purposes is done on present, or recent past, performance. That is, the monitors of managers do not take into account how the firm has moved historically (in previous years) to the market (which is in essence what the firm's beta measures), but rather how it is currently performing. Thus the beta adjustment is not undertaken. Weisbach (1988) and Warner et al (1988) do not adjust for beta. Weisbach argues that the firm's performance from previous years (that is, 5 or 6 years back) are not necessarily correlated with today's performance and may therefore bias the results.

## **5. Results**

### **5.1. Logit Model Predicting CEO Replacement**

Table 4 presents the results of the logit model to test each of the three hypotheses, using the current performance measure.

[Insert Table 4 here]

Regression 1 tests whether there exists an inverse relationship between the likelihood of CEO turnover and the firm's performance. The coefficient of the return variable is negative as theorised, but insignificant. Therefore, there is no empirical support for the hypothesis that the board of directors will remove a CEO for current poor performance. Even though this result suggests that overall, the board of directors may not be monitoring and removing a CEO for poor short term performance, there could be two different explanations. Firstly, the insignificance of the return-CEO replacement relationship may be due to differences in board composition which is examined in Regression 2 and 3.

However, the results in regression 2 do not support the hypothesis that non executive directors are more likely than executive directors to remove a CEO for poor performance. For the executive dominated boards, the return coefficient (0.06) is not significantly related to CEO change. For the non executive

boards, the return coefficient ( $-0.35 = 0.06-0.41$ ), is negative as hypothesised but insignificant.<sup>22</sup> Similarly in Regression 3, the return coefficient for non independent ( $-0.11$ ) and independent boards ( $-0.25 = -0.11-0.14$ ) is negative but insignificant. Thus overall, it appears that current stock performance does not significantly determine the likelihood of CEO change and the results are similar across different board types.

The results are in contrast to those reported for the U.S.(Weisbach (1988) and Warner, Watts and Wruck (1988)), but are consistent with those reported for Japan (Kang and Shivdasani (1995), and Kaplan (1994)) and Germany (Kaplan (1994a)).

Secondly, the insignificance of the current return-CEO replacement relationship may be due to the possibility that the Australian market setup, due to the lack of market pressure for short term performance, does not initiate board action against the CEO. In this scenario, it is plausible that before removing the CEO, the firm tries to resolve the matter internally within the existing board - management configuration. Thus, if performance does not improve despite mild corrective action, we may find that CEO replacement takes place with a lagged response.

Table 5 presents the results of lagged performance as a predictor of CEO turnover. In regression 1, the coefficient of market adjusted performance is negative and significant<sup>23</sup>, indicating that irrespective of board types, poor performance increases the likelihood of CEO turnover. In addition, the results are consistent with the monitoring hypothesis. In regression 2, the return coefficient ( $-0.76 = -0.33-0.43$ ) for non executive boards is significant at the 5% level. The result implies that boards dominated by non

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<sup>22</sup> The standard deviation used to calculate the t statistics of the combined coefficient is the square root of the sum of the variance of A and B multiplied by the covariance of A and B. A is the return estimate and B is the interactive return estimate from the logit regression.

<sup>23</sup> Following Weisbach (1988), we use a one tailed t test.

executives are more likely than executive dominated boards to remove the CEO for poor performance.

In regression 3, the results show that independent boards are more likely than non independent boards to remove CEOs for poor performance, although the coefficient ( $-0.70 = -0.25-0.45$ ) is not significant at conventional levels.

[Insert Table 5 here]

Thus overall, the results in Tables 4 and 5 suggest that despite the similarity in the board structure between Australian and Anglo-Saxon systems, there are differences in the sensitivity of CEO turnover to poor performance. More specifically, for Australian firms, it is lagged performance rather than current performance that seems to influence the board's decision to remove the CEO. However, similar to the U.S./U.K. markets, non executive dominated boards are more likely to remove poor performing CEOs.

To further test the timing of the response to poor performance, a two year return measure (the firm's stock return less the return on the market index for the eight quarters prior to the quarter in which the CEO change is announced), is regressed against CEO change. Regression 4 in Table 5 shows that the coefficient of market adjusted long term performance is negative and significant, indicating that irrespective of board types, long term poor performance increases the likelihood of CEO turnover. This result suggests that it takes a number of years of poor performance before the board decides to terminate the CEO.

One reason for the partial support of the boards hypothesised role, may be the visibility and consequent scrutiny of firms by markets. It is possible that large firms are more closely followed by market analysts and ownership structure of large firms reflects higher absolute stakes and hence closer monitoring by active investors. Thus, large firm boards may be more responsive to performance fluctuations and hence more likely to remove poor performing CEOs. In addition, it is possible that in smaller firms, the board structure has not evolved and/or the firm is still family/founder dominated. Thus, there may be a less pronounced

effect of board types in determining the performance-turnover relationship in small firms, compared to large firms.

The above analysis is repeated for large and small firms. The results for large firms are presented in Table 6<sup>24</sup>. The results in regression 2 support the hypothesis that non executive directors are more likely than executive directors to remove a CEO as the coefficient of the variable for the non executive dominated board of directors (-1.33 = -1.03-0.30), is significant at the 5% level. Similarly, the results in regression 3 support the monitoring hypothesis. Independent directors are more likely than non independent directors to remove a CEO for poor performance as the coefficient of the variable for independent boards (-2.81 = -1.73-1.08) is negatively significant at the 5% level. In addition, the results in regression 4 indicate that long term poor performance increases the likelihood of CEO turnover. Similar regressions were run for small firms but there were no significant relationships between CEO turnover, performance and board types.

[Insert Table 6 here]

The results imply that for Australian firms, corporate boards are effective mechanisms in taking corrective action against poor performing CEOs. However, the board is more effective in larger firms than smaller firms and there appears to be a lagged response compared to the U.S./U.K. markets where current poor performance results in CEO removal.

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<sup>24</sup>Large firms are those with a market capitalisation greater than A\$1.1billion. Small firms have a market capitalisation between A\$330 million and A\$1.1billion.

To make the results directly comparable to U.S. studies, we investigate the turnover performance relationship using Weisbach's (1988) board classifications<sup>25</sup>. The results are presented in Table 7. In Panel A, regression 1 suggests that there is not an outside dominated board effect on the relationship between current performance and CEO turnover. The results do not change when we control for board size in regression 2. The results are in contrast to Weisbach (1988) who finds a significant relationship. The panel B results use lagged return as a predictor of CEO turnover. The relationship between lagged return conditional upon board type is not significant at conventional levels, consistent with Weisbach (1988). However, when the sample is restricted to large firms in panel C, we find that poor performance increases the likelihood of CEO removal in outsider dominated boards. In regression 1 and 2, the coefficients for outside dominated boards (-2.31 = -1.16-1.15 and -2.27 = -1.11-1.16, respectively) are significant at the 5% level. Overall the results confirm our previous finding that Australian boards are more effective in removing CEOs in large firms than small firms and the corrective action takes place with a response lag. The size effect result is in contrast to Weisbach (1988) who finds that his results are not sensitive to firm size. This result may be a factor of the small number of truly large Australian firms as well as the large discrepancy in the size between large and small Australian firms.

[Insert Table 7 here]

The difference between the timing of the CEO removal in Australia and US may be attributed to differences in the corporate governance methodologies used by key institutional investors. U.S. institutional investors (such as CalPERS) tend to have an aggressive and preemptive methodology and thus there is a quicker reaction to poor performance, due to aggressive action from external parties. In Australia, institutional investors (such as AMP) adopt a less aggressive, informal approach. Often after a problem is discovered, the institutional investor will informally meet with the firm and discuss possible solutions. If the issue is not settled or further issues arise, then there is a public corporate governance reaction to the

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<sup>25</sup> As suggested by the reviewer.

problem..<sup>26</sup> Thus, there is a lag between discovery and action.

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<sup>26</sup> Ascertained from interviews with Leigh Hall, Deputy Managing Director, AMP.

In Table 8, we present the calculation of implied probability of CEO turnover in response to current and lagged performance which allows the examination of the economic significance of the results.<sup>27</sup> The difference in the likelihood of CEO turnover between the top and bottom performance deciles is 3.5% for current performance and 10.7% for lagged performance. The results are similar to Weisbach (1988) who finds a difference of 3% for U.S. firms and Kang and Shivdasani (1995) who find a difference of 3.9% for Japanese firms. We find that for outside boards, the probability of removal of the CEO is higher than for inside dominated boards, in all performance deciles. Further, the difference between the probabilities of CEO removal between the bottom and top performance lagged performance deciles for inside boards is lower than that for outside boards, similar to Weisbach (1988). Finally, consistent with the monitoring hypothesis there is a monotonic increase in probabilities of CEO removal as we move from the lowest percentage of outsiders to the highest percentage except for the two worst and the best performing deciles.

[Insert Table 8]

## 5.2 Event Study Results

Table 9 reports the results of the announcement effect of CEO change.

[Insert Table 9 here]

The results show a positive, but insignificant abnormal return in the stock price on the day of the announcement. In contrast, the day following the announcement has a significant negative abnormal return which suggests a lagged response to the announcement or the information only flowing to the market the day after the announcement to the stock exchange (due to the lateness of the time of day at which the

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<sup>27</sup> This point was highlighted by the reviewer to make the results directly comparable to those of Weisbach (1988).

information is supplied).

The results are in contrast to Weisbach (1988) who finds a significant positive effect. He concludes that this is consistent with the hypothesis that directors act in the interest of stockholders. Therefore, the market interprets the change in CEO as being motivated to enhance stockholder wealth, which would result in the market upgrading the future forecast for the firm, and hence an increase in the stock price. Additionally, a zero announcement effect may be interpreted as being good news for some firms and bad for others (Warner, Watts and Wruck (1988)).

A possible explanation of the negative announcement effect, is that the short term effect of the change dominates the long term effect. The effect of a change in the CEO will have an adverse short term effect on the firm, as there will be a settling in period for the new CEO, a potential restructure of the management in the firm and a general period of distraction from the core business of the firm. In addition, in the short term, the problems that caused the change in CEO may still exist (which will adversely affect the performance of the firm). In contrast, in the long term, the change in CEO should improve the performance of the firm (this is based on the assumption that the firm would hire a qualified and capable CEO). If there is a negative announcement effect, this implies that the market judges that the short term negative effect is greater than the long term positive effect.

A further potential explanation of the negative effect is derived from the corporate governance process in Australia. Much of the corporate governance methodology is conducted in private. Often, the only signal to the market of a corporate governance issue at a firm is the final process of the removal of a CEO. Thus, the announcement of a change in CEO may be the first time the market is informed about a corporate governance issue and thus lead investors to revise their forecasts of the firm.

In addition, the sample of CEO changes is divided on the basis of board composition into an independent

director dominated or non independent dominated board to investigate whether the present corporate governance structure at the firm influences the market's reaction. The announcement effect of a CEO change for a firm with a non independent board, is negative and significant (at a 10% level). This result conforms to the explanation of the overall negative market reaction to a CEO change. An additional consideration is the concept that an independent director will monitor managers more strictly than non independent directors. For non independent directors to remove a CEO, the action that motivated the change in CEO must have been significantly detrimental to the interests of stockholders. The market interprets the change in CEO of a firm with a non independent board as bad news about the current situation of the firm. There is an insignificant announcement effect for the change in the CEO of a firm with an independent board. The insignificant result is consistent with Warner et al (1988). Their conclusion, that the news of a CEO change is good for some firms but bad news for other firms, appears to be relevant for Australian firms with independent boards.<sup>28</sup>

Furthermore, the effect of previous stock performance (which is a measure of the performance of the managers and is a possible proxy for monitoring by directors) on the announcement is investigated. The sample is divided on the criteria of the stock price return (relative to the market) over the previous year. Table 10 presents the announcement effects.

[Insert Table 10 here]

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<sup>28</sup> The abnormal stock price movement in the period around the announcement of a change in CEO is analysed. However apart from day 1, the results are insignificant. This is consistent for all board types.

Similarly, only day one has significant abnormal returns. Firms which have negative performance, followed by a CEO change, have an insignificant announcement effect. This result is consistent with the overall finding of Warner et al (1988). A priori, the announcement effect is expected to be positive as it signals the removal of an ineffective manager, and thus improved performance. However, this potential improvement in the firm may be countered/nullified by the release of other previously unknown information about the internal factors of the firm. Additionally, the suggestion that the short term disruptions dominate (or in this case, cancel) the long term improvement, may also contribute to the insignificant result.

Firms that have positive performance followed by a CEO change, have a significant negative announcement effect. This suggests that the announcement of a change in CEO contains adverse information about other aspects of the operation of the firm. Thus, when a CEO of a firm that has performed well is removed, the market will search for the underlying reason. If a corporate governance type issue is discovered, the stock is devalued (by a large margin as previously they may have overvalued the firm, hence the positive pre-announcement performance).

In addition, the sample is divided by prior performance and board composition to estimate the relationship between the announcement effect and corporate governance issues. Only one of the four classifications, a firm with prior positive performance and a non-independent board, yields significant negative results. The other three classifications yield insignificant results.<sup>29</sup>

The strong negative announcement effect of the prior positive performance and a non independent board sample may be the best proxy for a true retirement<sup>30</sup>. A non independent board is the least likely to remove

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<sup>29</sup> One problem with dividing the overall sample into these segments, is the small size of each segment. This may lead to small sample size bias in the results. Thus strong overall conclusions cannot be made.

<sup>30</sup> We were unable to directly determine if a CEO change was due to retirement.

a CEO. Furthermore, prior positive performance at face value (and with no other information) would not constitute a rationale to remove a CEO. Thus this combination may well reflect a true retirement (or at least be the best proxy). Therefore, the negative announcement effect suggests that the short term disruption, due to a new CEO being appointed (and having to learn about the operation of the firm), dominates the long term improvement a new CEO may bring to the firm.<sup>31</sup>

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<sup>31</sup> On the other hand, the theory of new 'bad' information about the firm, coupled with the seriousness of this if a non-independent board is to act, may also be applicable.

The insignificant results of the event study approach highlight the assertion by Warner et al(1988) for the need to use predictive models (such as the logit model).The negative announcement effect of a change in CEO may be explained by two (possible contradictory) theories. Firstly, that the short term ‘damage’ to the firm dominates the long term improvement from a change in a (poorly performing) CEO. Secondly, the announcement of a change in CEO, releases previously unknown<sup>32</sup> information about certain internal aspects of the firm.

## **6. Conclusion**

We provide evidence of the relationship between CEO turnover and firm performance for Australian firms. Australian board structures and mechanisms are more similar to those in the U.S./U.K but market activity characteristics are more similar to Japanese/German systems. We find a negative relationship between lagged firm performance and CEO turnover in comparison to U.S. results where the relevant performance measure is the current stock price return. In addition the monitoring hypothesis is supported as non executive and independent boards are more likely to monitor and remove a CEO for poor performance. However, in contrast to the U.S., a size effect is found for Australian firms whereby the monitoring hypothesis appears to only be relevant for large Australian firms.

The difference between the timing of the CEO removal in Australia and US may be attributed to differences in the corporate governance methodologies used by key institutional investors. US institutional investors tend to have an aggressive and preemptive methodology compared to a less aggressive, informal approach used by Australian institutional investors.

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<sup>32</sup>Because much of corporate governance activity, monitoring and investigative of a CEO behaviour is conducted in private.

In addition, the announcement of a CEO change has a lagged significant negative effect. In contrast, the announcement effect in the US is either positive (Weisbach (1988)) or zero (Warner, Watts and Wruck (1988)). Two potential explanations of the effect are suggested. Firstly, the short term damage from the change (due to upheaval caused by the change, distraction of the appointment and settling in period of the new CEO as well as the existing problems which caused the change) dominates the potential long term benefit from a change in CEO (assuming that the new CEO is suitably qualified and capable) as well as the correction of the current problems. Secondly, the news of the change in CEO might release previously unknown information about potential problems or managerial behavior at the firm. The release of unknown information is consistent with the private or hidden aspects of the corporate governance system in Australia.

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Figure 1

A Comparison of the Board Size and the Percentage of Executives, Outsiders and Insiders of Australian, Japanese, U.S. and German Boards.

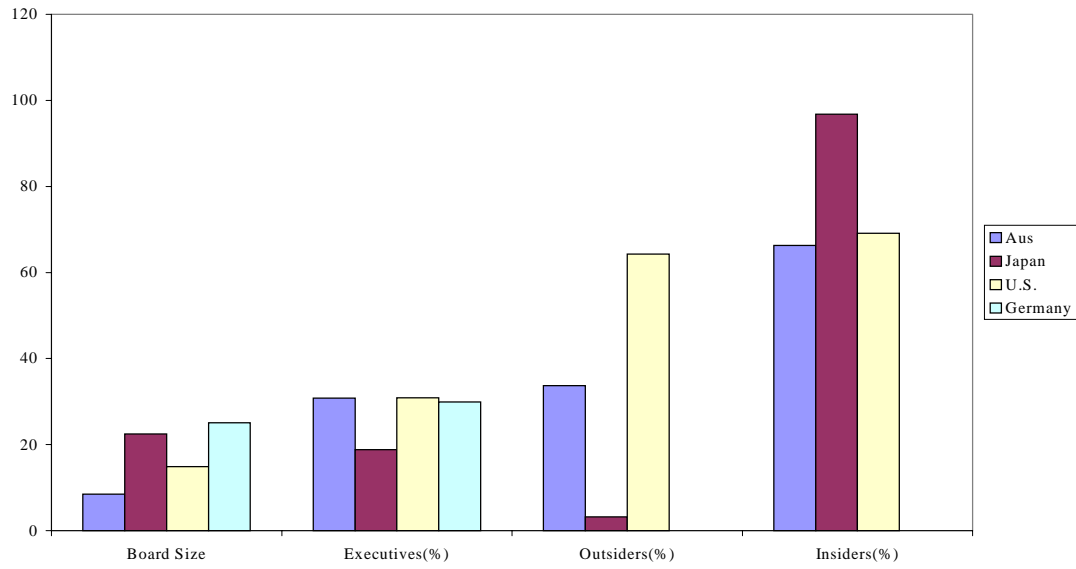
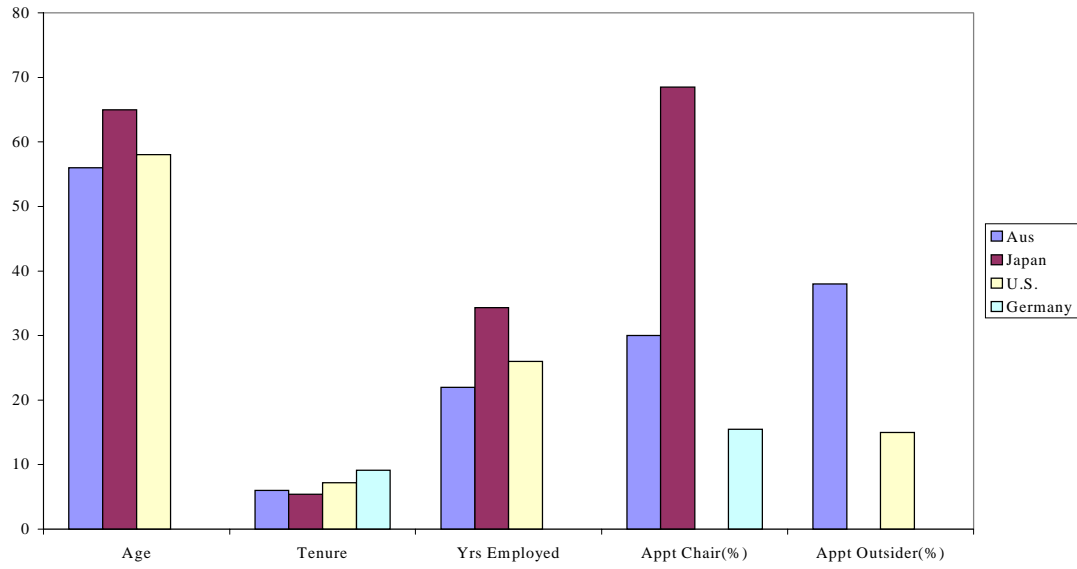


Figure 2

A Comparison of the Age, Tenure, Number of Years Employed in the Firm of the CEO, the Percentage



of CEO's Appointed Chairman After Removal and the Percentage of Outsiders Replacing a CEO.

Table 1

## Comparison of Turnover Studies in the US, Japan, Germany, the UK and Australia

Study	Country	Period	Turnover type	Stock performance	Coefficient of logit model
Warner, Watts and Wruck (1988)	US	1963-78	CEO turnover	Current return	-1.17 <sup>b</sup>
				Lagged return	-0.28
Weisbach (1988)	US	1974-83	CEO turnover	Current return	-0.64 <sup>b</sup>
				Lagged return	-0.10
Kaplan (1994a)	Germany	1981-89	turnover of management board <sup>19</sup>	Current return	-0.080 <sup>c</sup>
			turnover of chairman	Lagged return	-0.103 <sup>b</sup>
Kaplan (1994)	Japan	1980-88	president turnover	Current return	0.053
				Lagged return	-0.045
			non standard president turnover	Current return	-0.045
	US	1980-88	representative directors	Lagged return	-0.069 <sup>a</sup>
			CEO turnover	Current return	-0.056
				Lagged return	-0.100 <sup>b</sup>
Kang and Shivdasani (1995)	Japan	1985-90	executive director turnover	Current return	-0.168 <sup>c</sup>
				Lagged return	-0.067
Cosh and Hughes (1997)	UK	1989-94	CEO turnover	Current return	-0.072 <sup>b</sup>
				Lagged return	-0.081 <sup>c</sup>
Present paper	Aus	1989-95	CEO turnover	Current return	-0.15
					Current return
Present paper	Aus	1989-95	CEO turnover	Current return	-0.95 <sup>c</sup>
					Current and Lagged return
Present paper	Aus	1989-95	CEO turnover	Current return	-0.13
					Lagged return

<sup>a</sup> Significant at the 1% level, <sup>b</sup> Significant at the 5% level, <sup>c</sup> Significant at the 10% level

<sup>19</sup> OLS regression results.

Table 2

Composition of 89 Australian Boards 1989-1995.

The average percentage of executives, non independent non executives and independent executives on the board are estimated for each year. Executives are employees of the firm and non independent non executives are ex-employees, directors that have business dealings with the firm, or are related (by family) to management directors.

	Executive (%)	Non Independent Non Executive (%)	Independent Non Executive (%)
1989	33.2	36.0	30.8
1990	32.7	35.2	31.9
1991	31.9	34.9	33.2
1992	31.0	34.6	34.4
1993	29.7	32.6	37.7
1994	29.1	32.4	38.6
1995	28.9	32.2	38.9

Table 3

## Characteristics of CEO Change

The age, the tenure of the incumbent CEO in his/her current position, the tenure of the CEO as a director on the board and the years employed by the firm are reported in the first set of columns. Similar characteristics of the replacement are reported in the second set of columns. The original sample is of 59 firms between 1989 and 1995. In panel B, the number of CEO changes (n) is not equal to 59 as data was not available for all CEO changes.

Panel A Descriptive characteristics of incumbent CEO and replacement							
	Current CEO				Replacement		
	Age	Tenure (CEO)	Tenure (director)	Years employed	Age	Tenure (director)	Years employed
Average	55.70	5.98	10.15	21.96	49.65	3.29	17.93
Median	56	4	8	20	50	3	18
Std deviation	7.04	5.77	7.36	13.71	5.62	3.33	11.22
N	48	51	44	39	47	33	33
Panel B Appointments and Outsider Replacement for CEO Changes by Year of Change							
	89	90	91	92	93	94	95
Appointed chairman	1	1	3	5	1	4	4
Not appointed chairman	2	3	4	7	6	4	6
Outsider replacement (data available)	1 (2)	0 (4)	0 (5)	6 (16)	3 (6)	6 (10)	3 (7)
Number of CEO changes	7	10	11	19	11	11	8

Table 4

Results of Logit Models - Current Period Performance Measured in the Four Quarters (the year) Preceding CEO Turnover for 89 Firms from 1989 to 1995

(T-statistics in parenthesis)

Regression Number	1	2	3
Constant	-3.32 <sup>a</sup>	-4.33 <sup>a</sup>	-3.43 <sup>a</sup>
	(-28.56)	(-9.41)	(-24.70)
Return	-0.13	0.06	-0.11
	(-0.67)	(0.45)	(-0.47)
D <sub>Non Executives</sub>		1.12 <sup>a</sup>	
		(2.36)	
D <sub>Non Executives</sub> *Return		-0.41	
		(-1.15)	
D <sub>Independant</sub>			0.40 <sup>c</sup>
			(1.58)
D <sub>Independant</sub> *Return			-0.14
			(-0.21)

<sup>a</sup> Significant at 1%, <sup>b</sup> Significant at 5%, <sup>c</sup> Significant at 10%

Return is the adjusted return in the four quarters prior to the announcement period

D<sub>Non Executives</sub> is a dummy variable that is 1 if the board contains more than 50% non executive directors

D<sub>Independant</sub> is a dummy variable that is 1 if the board contains more than 50% independent directors

Table 5

Results of Logit Models - Lagged Return as Performance Measure

Lagged Period Performance Measured in the Eight to Fifth Quarter Preceding CEO

Turnover for 89 Firms from 1989 to 1995

(T-Statistics in parenthesis)

Regression number	1	2	3	4
Constant	-3.34 <sup>a</sup> (-28.48)	-4.30 <sup>a</sup> (-9.54)	-3.45 <sup>a</sup> (24.65)	-3.24 <sup>a</sup> (-28.16)
Return <sub>-1</sub>	-0.44 <sup>c</sup> (-1.49)	-0.43 <sup>c</sup> (-1.40)	-0.45 <sup>c</sup> (-1.53)	-0.54 <sup>b</sup> (-2.41)
D <sub>Non Executives</sub>		1.07 <sup>b</sup> (2.31)		
D <sub>Non Executives</sub> *Return <sub>-1</sub>		-0.33 <sup>b</sup> (-1.00)		
D <sub>Independant</sub>			0.42 <sup>b</sup> (1.66)	
D <sub>Independant</sub> *Return <sub>-1</sub>			-0.25 (-0.39)	

<sup>a</sup> Significant at 1%, <sup>b</sup> Significant at 5%, <sup>c</sup> Significant at 10%Return<sub>-1</sub> is the lagged market adjusted returnD<sub>Non Executives</sub> is a dummy variable that is 1 if the board contains more than 50% non executive directorsD<sub>Independant</sub> is a dummy variable that is 1 if the board contains more than 50% independent directors

Table 6

## Results of Logit Models - Large Firms

Lagged Return Measured in the Eight to Fifth Quarter Preceding CEO Turnover as

Performance Measure for 44 firms from 1989 to 1995

(T-statistics in parenthesis)

Regression number	1	2	3	4
Constant	-3.27 <sup>a</sup> (-19.81)	-4.01 <sup>a</sup> (-5.57)	-3.32 <sup>a</sup> (-16.41)	-3.36 <sup>a</sup> (18.49)
Return <sub>-1</sub>	-0.98 <sup>b</sup> (-2.03)	-1.03 <sup>b</sup> (-2.05)	-1.08 <sup>b</sup> (-2.19)	-1.39 <sup>a</sup> (-3.38)
D <sub>Non Executives</sub>		0.79 (1.08)		
D <sub>Non Executives</sub> *Return <sub>-1</sub>		-0.30 <sup>b</sup> (-0.56)		
D <sub>Independant</sub>			0.34 (0.10)	
D <sub>Independant</sub> *Return <sub>-1</sub>			-1.73 <sup>b</sup> (-1.62)	

<sup>a</sup> Significant at 1%, <sup>b</sup> Significant at 5%, <sup>c</sup> Significant at 10%Return<sub>-1</sub> is the lagged market adjusted returnD<sub>Non Executives</sub> is a dummy variable that is 1 if the board contains more than 50% non executive directorsD<sub>Independant</sub> is a dummy variable that is 1 if the board contains more than 50% independent directors

Table 7

## Results of Logit Models - Weisbach Classification

Current Return Measured in the Four Quarters (the year) Preceding CEO Turnover and Lagged Return Measured in the Eight to Fifth Quarter Preceding CEO Turnover as the Performance Measure for 89 firms from 1989 to 1995. Australian results are compared to U.S. results in Weisbach(1988).

(T-statistics in parenthesis)

Panel A			
Current Return			Weisbach results
Regression number	1	2	1
Constant	-3.48 <sup>a</sup> (-20.57)	-4.26 <sup>a</sup> (-10.65)	-4.39 <sup>a</sup> (31.40)
Return	-0.37 (-0.97)	-0.33 (-0.84)	-0.46 (0.92)
D <sub>Mixed</sub>	0.19 (0.71)	0.12 (0.46)	0.13 (0.68)
D <sub>Mixed</sub> *Return	0.66 (1.29)	0.70 (1.33)	0.26 (0.39)
D <sub>Outside</sub>	0.57 <sup>b</sup> (1.85)	0.54 <sup>b</sup> (1.74)	-0.18 (0.86)
D <sub>Outside</sub> *Return	0.19 (0.24)	0.25 (0.31)	-1.17 <sup>a</sup> (1.60)
Board Size		0.09 <sup>b</sup> (2.09)	
Panel B			
Lagged Return			Weisbach results
Regression number	1	2	1
Constant	-3.52 <sup>a</sup> (-20.36)	-4.26 <sup>a</sup> (-10.65)	-4.60 <sup>a</sup> (28.80)
Return <sub>-1</sub>	-0.59 <sup>c</sup> (-1.48)	-0.66 <sup>c</sup> (-1.57)	-0.10 (0.20)
D <sub>Mixed</sub>	0.25 (0.92)	0.18 (0.66)	0.23 (1.15)
D <sub>Mixed</sub> *Return <sub>-1</sub>	0.66 (0.96)	0.78 (1.11)	-0.08 (0.11)
D <sub>Outside</sub>	0.61 <sup>b</sup> (1.95)	0.57 <sup>b</sup> (1.83)	-0.03 (0.14)
D <sub>Outside</sub> *Return <sub>-1</sub>	-0.31 (-0.34)	-0.25 (-0.26)	-0.44 (0.71)



Table 8

Implied Annual Probability Of Resignation By Market Adjusted Return  
Decile And Outsider Representation On The Board

Panel A Current Returns					
Decile	Return vs market <sup>a</sup>	Entire sample <sup>b</sup>	Percentage outsiders on board		
			Inside <sup>c</sup> < 40%	Mixed <sup>d</sup> > 40% < 60%	Outside <sup>e</sup> > 60%
1	-0.527	0.155	0.151	0.125	0.237
2	-0.292	0.150	0.138	0.135	0.228
3	-0.189	0.148	0.133	0.140	0.224
4	-0.112	0.147	0.129	0.143	0.222
5	-0.44	0.145	0.125	0.146	0.220
6	0.026	0.144	0.121	0.149	0.218
7	0.102	0.143	0.117	0.152	0.215
8	0.200	0.141	0.112	0.156	0.213
9	0.368	0.138	0.104	0.163	0.209
10	1.407	0.120	0.064	0.198	0.188

## Panel B Lagged Returns

Panel B Lagged Returns					
Decile	Return vs market <sup>f</sup>	Entire sample <sup>g</sup>	Percentage outsiders on board		
			Inside <sup>h</sup> < 40%	Mixed <sup>i</sup> > 40% < 60%	Outside <sup>j</sup> > 60%
1	-0.644	0.188	0.179	0.146	0.345
2	-0.361	0.166	0.150	0.147	0.273
3	-0.234	0.157	0.138	0.148	0.251
4	-0.140	0.151	0.131	0.149	0.234
5	-0.060	0.146	0.121	0.150	0.221
6	0.016	0.141	0.117	0.151	0.210
7	0.095	0.136	0.111	0.151	0.199
8	0.194	0.130	0.104	0.152	0.184

9	0.354	0.121	0.093	0.153	0.161
10	1.265	0.081	0.048	0.158	0.089

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Implied probabilities are obtained from logit equations that predict the probability of a CEO resignation in a given quarter using the market adjusted returns preceding CEO turnover as the independent variable.

The probabilities are then multiplied by four to approximate annual probabilities

<sup>a,k</sup> The return vs market is the return on the firm's stock in the four quarters preceding CEO turnover for the median firm in a given decile of firms ranked in terms of stock returns less a market index

<sup>b</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.32 - 0.13(\text{market adjusted returns})$

<sup>c</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.48 - 0.37(\text{market adjusted returns})$

<sup>d</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.29 + 0.36(\text{market adjusted returns})$

<sup>e</sup> Estimated model :  $\ln(\text{odds of resignation}) = -2.91 - 0.18(\text{market adjusted returns})$

<sup>f</sup> The return vs market is the return on the firm's stock in the fifth to eighth quarters preceding CEO turnover for the median firm in a given decile of firms ranked in terms of stock returns less a market index

<sup>g</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.34 - 0.44(\text{market adjusted returns})$

<sup>h</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.52 - 0.59(\text{market adjusted returns})$

<sup>i</sup> Estimated model :  $\ln(\text{odds of resignation}) = -3.27 + 0.07(\text{market adjusted returns})$

<sup>j</sup> Estimated model :  $\ln(\text{odds of resignation}) = -2.91 - 0.90(\text{market adjusted returns})$

Table 9

## Abnormal Return and Measures of Variance Change Around the Announcement of CEO Change

The sample comprises 59 firms between 1989 and 1995. Day 0 is the announcement to the Stock Exchange of the CEO change.

Board	Number of CEO Changes	Abnormal Return	Variance change	Abnormal Return	Variance change	Abnormal Return	Variance change
Type		Day 0		Day 1		0 to 1	
All Types	59	0.16%	2.10	-0.49% <sup>b</sup>	1.92 <sup>b</sup>	-0.33%	2.67
(Full Sample)		(0.68)	(0.14)	(-2.03)	(2.15)	(-0.96)	(1.42)
Non-Independent Board	40	0.26%	1.96	-0.56% <sup>c</sup>	1.98	-0.30%	2.61
		(0.82)	(0.01)	(-1.75)	(1.45)	(-0.66)	(1.02)
Independent Board	19	-0.04%	2.41	-0.36%	1.79	-0.39%	2.79
		(-0.09)	(0.23)	(-0.88)	(1.69) <sup>c</sup>	(-0.69)	(1.03)

<sup>b</sup> Significant at 5%, <sup>c</sup> Significant at 10%

# T-statistic in parenthesis

^ Z-statistic in parenthesis

Table 10

Abnormal Return from Announcement of CEO Change by Board Type and Prior Performance for 59 Firms over 1989 to 1995.

Prior Performance	No of CEO Changes	Abnormal Return	Abnormal Return	Abnormal Return	Abnormal Return
Type		Day 0	Day 1	0 to 1	-3 to 3
Positive	27	0.44 (1.28)	-0.97 <sup>a</sup> (-2.82)	-0.53 (-1.09)	-0.48 (-0.53)
Negative	32	-0.07 (-0.19)	-0.08 (-0.23)	-0.15 (-0.30)	-0.17 (-0.18)
Independent Board with Negative	12	-0.40 (-0.77)	-0.29 (-0.55)	-0.68 (-0.93)	-1.37 (-1.00)
Independent Board with Positive	7	0.58 (1.01)	-0.48 (-0.83)	0.10 (0.13)	-0.59 (-0.39)
Non Independent Board with Negative	20	0.13 (0.25)	0.04 (0.07)	0.16 (0.23)	0.55 (0.40)
Non Independent Board with Positive	20	0.39 (0.93)	-1.15 <sup>a</sup> (-2.71)	-0.75 (-1.26)	-0.44 (-0.40)

<sup>a</sup> Significant at 1%