

Does Gender Matter in the Boardroom? Evidence from the Market Reaction to Mandatory New Director Announcements¹

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Abstract:

Around the world, policy makers are mandating gender quotas for boards of publicly-traded firms. Since the benefits and costs of these quotas accrue to shareholders, it is important to see how they react to the appointment of female directors. Using data on mandatory announcements of new director appointments, we find that the gender of directors appears to be value-relevant. On average, shareholders value additions of female directors more than they value additions of male directors. Firms with workplace practices in place to promote workplace equality appear to benefit the most from boardroom gender diversity. This suggests that appointing female directors may help resolve value-decreasing stakeholder conflicts.

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JEL Codes: J16; G30

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1. Introduction

In recent years, boardroom gender diversity has become a key policy focus in many countries. Norway enacted a law in 2003 requiring companies to have 40% female directors by 2008. Spain passed guidelines in 2007 to encourage companies to increase the share of female directors to 40% by 2015. On January 20, 2010 the French National Assembly proposed a law that will impose 20% gender quotas on boards of listed French companies within 3 years of the law's adoption and 40% quotas after 6 years. Similar laws are currently awaiting final enactment in Belgium, Italy and the Netherlands. Other countries, such as Australia, Germany and the UK, are asking companies to set voluntary boardroom gender quotas or disclose diversity policies (see e.g., Davies, 2011, and Deloitte, 2011).

Quotas have been justified on the basis of notions of fairness and equality and a desire to compensate for a history of disadvantage. If companies engage in taste-based discrimination against female directors (Becker, 1971), then quotas may improve firm performance. However, gender quotas may also impose costs on companies if they restrict them from appointing the best available candidate. In publicly-traded companies these costs are borne by shareholders. To understand the potential consequences of boardroom gender policies, it is therefore important to examine how shareholders view appointments of female directors in an environment in which quotas have not yet been introduced.

Ex ante, it is not clear whether we should expect a positive or a negative stock price reaction to the announcement of new female directors. If the appointment of a female director would enhance board effectiveness or signal a value-enhancing change in strategy, we would expect the stock price reaction to be positive on average. As the Higgs Review (2003) and the Tyson Report (2003) suggest, female directors may enhance board effectiveness because they bring different perspectives to the table. Although one may question whether female director candidates are so different from male director candidates, Adams and Funk (2011) show that female directors differ significantly from male directors in survey measures of human values and risk aversion. Moreover, recent evidence suggests that different attributes of female directors can improve board effectiveness. Adams and Ferreira (2009) show that female directors have better attendance behavior at board meetings and male directors have better attendance behavior when boards are more gender diverse. Gul, Srinidhi and Tsui (2008) and Srinidhi, Gul and Tsui (2011) show that boardroom gender diversity is positively related to audit effort and earnings quality.

Rosenstein and Wyatt (1990) argue that firms may signal strategy changes when they appoint independent directors to the board. Similar arguments may apply when companies appoint female directors. For example, they may use the appointment to commit to a more

stakeholder-oriented strategy. Adams, Licht and Sagiv (2011) provide survey evidence that female directors are more stakeholder-oriented than male directors. Matsa and Miller (2010) document that companies affected by the Norwegian boardroom gender quota laws increased relative labor costs and employment. This is direct evidence that female directors may be more stakeholder-oriented than male directors.

Although Matsa and Miller (2010) find that short-term profits of the firms in their sample decreased after the implementation of the gender quota, stakeholder-oriented strategies may add value in the long run. For example, Cohen and Huffman (2007) show that the gender wage gap for non-managerial workers is lower the greater the representation of women in management. If more equal pay practices lead to greater productivity, greater boardroom diversity can increase company performance. This argument is consistent with Tate and Yang (2011) who find that an important externality of female corporate leadership is better workplace conditions for women. To the extent that women are treated differently because of their gender, not because of differences in productivity, Tate and Yang argue that improving workplace conditions can improve firm value.

On the other hand, arguments in Kanter (1977) and Westphal and Zajac (1995) suggest that more diverse boards can perform worse because people prefer working with people who are demographically similar to themselves. Thus, if female director appointments are primarily symbolic, we might expect no or a negative average stock price reaction to the appointment of female directors.

Since boardroom diversity may have benefits and costs, the sign of the average stock price reaction to increases in diversity must be determined empirically. This is our primary focus. We are interested not only in how the market perceives the appointment of female directors on average but how the market perceives their appointment relative to men. If the market reacts systematically differently to female appointments, this suggests that gender may matter above and beyond other director characteristics.

It seems unreasonable to expect that the effect of boardroom diversity will be the same across all companies. Consistent with this argument, Adams and Ferreira (2009) find that gender diversity is negatively related to performance in companies with otherwise well-governed boards. Their interpretation is that while female directors may improve the monitoring intensity of the board, not all companies will benefit from additional monitoring. Because it helps shed light on mechanisms through which female directors may add value, we also examine how the stock price reaction to new director appointments depends on the interactions between gender and board, company and industry characteristics.

To date there is almost no evidence that the market reacts to female director appointments. In their analysis of appointments of female directors to the boards of Fortune 500 firms in the 1990s, Farrell and Hersch (2005) find that the stock price reaction is insignificant. However, they do not compare the stock price reaction to the appointment of male directors, thus it is not clear whether the market perceives female directors differently from male directors.

One problem with conducting an event study of director appointments is that formal elections take place at the annual meeting and the announcement of the new director appointment often appears in the proxy statement or annual report. Because of the amount of information released around the annual meeting, it is difficult to attribute the stock price reaction around proxy or annual meeting dates to new director appointments. On the other hand, results based on director appointment announcements that appear in press releases or newspaper articles prior to proxy dates may be biased due to sample selection and strategic timing of press releases, as Rosenstein and Wyatt (1990) suggest. If companies time announcements depending on their expectation of the market's reaction, abnormal returns around event dates may be systematically biased. This may be a particularly serious problem for event studies trying to identify gender effects since female directors are generally in the minority and their appointments may attract more attention than the appointment of male directors. Another problem is that if the appointment of female directors is anticipated, it will be difficult to detect the market reaction on the event date.

We circumvent these problems using unique data on director appointment announcements from Australia. While the governance and disclosure environment in Australia is otherwise very similar to that in the US, announcements of director appointments prior to the proxy statement are voluntary in the US, whereas they are mandatory in Australia. Specifically, the Australian Securities Exchange (ASX) requires companies to notify it immediately of any new director appointments. This is useful for our purposes since it means our data should have fewer biases due to sample selection and timing. Furthermore, companies may not notify any other market participant of the appointments until they have received confirmation from the ASX that it has already released this information via its website. Thus, appointments of directors in our sample are unlikely to have been widely anticipated by market participants.

There are other reasons why examining this issue in Australian data is interesting. First, recent reports (e.g., EOWA, 2008) indicate that female director representation in the largest companies in Australia (8.3%) is lower than in other countries (e.g., United States 14.8%, United Kingdom 11.0%, Canada 13.0% and South Africa 14.3%), which some argue indicates that corporate directorships in Australia are predominantly the domain of old-boys networks

(Ferguson, 2009). Because they are in short supply, it may be easier to detect a stock market reaction to female director appointments in Australia than in other countries. Second, the reporting environment in Australia requires listed firms to provide details of their directors' qualifications, experience and expertise in annual reports. This provides us with a wealth of director characteristics beyond those utilized in previous studies which we can control for to ensure we are identifying a gender effect.

Finally, although formal gender quotas have not yet been introduced in Australia, it is an important policy concern. In response to a drop in the number of board seats held by female directors from 2006 to 2008, the Australian Securities Exchange Corporate Governance Council released a proposal on 7 December 2009 to require listed Australian companies to adopt and disclose a diversity policy that includes measurable objectives relating to gender (ASX, 2009). This policy was formally incorporated into the 2nd edition of the Corporate Governance Principles and Recommendations and applies to listed entities from January 1, 2011. The disclosure approach to increasing boardroom gender diversity currently represents the main alternative to mandatory quotas. To better understand the implications of the different policy initiatives in this area, it is important to provide evidence on consequences of boardroom gender diversity from one of the first countries to adopt this alternative approach.

We find that the market reaction to female appointees is, on average, positive and significant. This suggests that the market does not perceive the appointment of female directors to be primarily motivated by tokenism. Moreover, the average reaction for female appointees is roughly 2 percent higher than for male appointees even after controlling for other appointee characteristics, such as independence, expertise and qualifications. This suggests that the gender of directors matters *per se*.

To examine why gender may be value-relevant, we investigate whether the valuation premium for female directors is related to firm, industry and hiring board characteristics. We find that the market reaction for female appointees is significantly higher than for male appointees in firms with boards that are not majority independent or are small. It is also higher in big firms and firms with high market-to-book ratios. This evidence is consistent with the argument in Adams and Ferreira (2009) that firms with more monitoring needs may benefit more from female director appointments. We also find that female appointees are more valuable than male appointees in the natural resource sector and in firms that have achieved recognition for programs to improve workplace conditions for women. This suggests that the appointment of female directors may improve conditions for stakeholders, in particular female employees, and that shareholders view these improvements as value-enhancing.

Our evidence complements the growing literature arguing that firms may benefit from the appointment of female directors (e.g., Carter et al., 2003 and Erhardt et al., 2003). One problem with studies based on accounting measures of performance is that their interpretation is often confounded by endogeneity problems. Because better performing firms are presumably more likely to appoint female directors and women are more likely to accept positions in better performing firms, it is difficult to give a causal interpretation to a positive coefficient on the proportion of female directors in performance regressions (see Ferreira, 2010). Event studies avoid this problem to a large extent, because abnormal performance is conditioned on all information available at the time of the appointment of female directors.

If there are social, business or regulatory penalties for not abiding by boardroom diversity policies, then the appointment of a female director may relate to the avoidance of penalties rather than the gender of the director itself. To be able to assess the implications of policy pressure to increase boardroom diversity, we focus on female director appointments made prior to the start of the boardroom gender diversity debate in Australia. Thus, our evidence only applies to companies that voluntarily appoint female directors. If companies experience pressure to appoint female directors by law or through governance codes, it is not clear that shareholders would continue to view the appointment of female directors in a positive light. Ahern and Dittmar (2010) and Nygaard (2011) conduct event studies around the introduction of the Norwegian gender quota laws. They find conflicting results. Ahern and Dittmar (2010) find that the market reacts negatively to the quota laws. In a larger sample of firms, Nygaard (2011) finds that the market reacts positively on average. Our results complement these findings since we document heterogeneity in the stock price reaction to individual female director appointments. Furthermore, our findings are consistent with Ahern and Dittmar's (2010) and Matsa and Miller's (2010) conclusions that board composition is value-relevant.

The remainder of the paper is organized as follows. We explain the benefits of using mandatory director appointment announcements in Section 2. In Section 3, we develop our hypotheses. Section 4 presents the data. Section 5 shows the event study results. In Section 6, we examine some reasons why directors' gender may be value-relevant. We discuss potential policy implications and conclusions in Section 7.

2. Prior literature and methodological background

2.1 Event study evidence around outside director appointments

In the first major director appointment event study, Rosenstein and Wyatt (1990) examine the market reaction to 1,251 independent director appointments to firms with CRSP data from 1981 to 1985 and find significant 2-day (-1,0) market model CARs of 0.13%. They further analyse the CARs as a function of director occupation, firm size and indicators for whether board size expands as a result of new director additions. The market reaction to appointments is insignificant in large firms and when appointments lead to board size expansions. But, the market reacts significantly positively to the addition of financial experts and non-manager (neutral) directors. Thus, firm and director characteristics appear important for understanding when outsiders add value.

The results of subsequent event studies on outsider appointments generally reach similar conclusions as in Rosenstein and Wyatt (1990). The overall reaction to the appointment of outsiders tends to be positive in samples of firms of varying size and insignificant in large firms. For example, DeFond, Hann and Hu (2005) find positive and significant 3 day CARs around the appointment of 1,733 independent directors between 1993 and 2002 in a sample of 594 firms from the Corporate Library. Shivdasani and Yermack (1999) examine 373 independent outsider appointments in a smaller sample of 341 Fortune 500 firms from 1994 to 1996 and find an average 3 day (-1,1) CAR of -0.11% which is insignificant. Fich (2005) examines 972 outside appointments at 432 Fortune 1000 companies during 1997-1999 and finds insignificant average 3 day CARs. Similar results are in Ferris, Jagannathan and Pritchard (2003) and Perry and Peyer (2005).

Even when they are insignificant, the average market reactions appear to be driven by the fact that some outsiders appear to add value to some firms while others do not. Shivdasani and Yermack (1999) document that the market reaction may depend on board structure. They find a significant negative reaction when independent directors are appointed and the CEO sits on the nominating committee. DeFond, Hann and Hu (2005), Fich (2005), and Goldman, Rocholl and So (2009) find that characteristics of outsiders matter. DeFond, Hann and Hu (2005) find that the market reaction to directors who begin serving on the audit committee is generally insignificant. However, the market reacts significantly positively when these directors are accounting experts. Fich (2005) finds that the market reaction is significantly positive when the outsider is a CEO of another company. Goldman, Rocholl and So (2009) find that the appointment of politically connected directors adds value.

2.2 Event studies around the appointment of individual female directors

The only event study analysis of the appointment of female directors in the US that we are aware of is Farrell and Hersch (2005). They examine 111 appointments of directors that involve only women in roughly 300 Fortune 1000 companies from 1990 to 1999 and find an insignificant market reaction regardless of whether there is an incumbent female director on the board. In contrast, Campbell and Minguez-Vera (2010) examine the market reaction to 47 female director appointments to listed Spanish firms between 1989 and 2001 and find a positive and significant reaction for 2- and 3-day CARs. Kang, Ding and Chareonwong (2010) examine 53 appointments of female directors to 45 Singapore Stock Exchange listed firms and also find positive and significant 2-day CARs.

There are several issues that confound the interpretation of these studies. First, none of them contrasts the announcement effect for women with the effect for men.³ If the announcement effect for men is more positive (negative) on average, then a smaller positive (negative) reaction to the appointment of female directors would suggest that the appointment of female directors is viewed as relatively bad (good) news. Second, except for Kang, Ding and Chareonwong (2010) these studies do not differentiate between insider and outsider appointments and Kang, Ding and Chareonwong (2010) differentiate between types of directors only in a multivariate regression in which it is unclear what the average effect for outside female directors is.⁴ The appointment of executives may be viewed differently by the market than the appointment of outsiders. Farrell and Hersch (2005) argue that most of the women in their sample are outsiders, which explains why the average market reaction is insignificant. The results in Campbell and Minguez-Vera (2010) and Kang, Ding and Chareonwong (2010) may differ because the proportions of executive appointments are higher.

Another problem is that other than some controls for outside status, none of the studies controls for individual director characteristics. Since prior event study evidence documents that director characteristics, such as occupation, may be important, it is unclear if we can attribute the market reaction to female director appointments to a pure gender effect or to the fact that most female directors happen to be lawyers, or “neutral outsiders” in the terminology of Rosenstein and Wyatt (1990), for example.

³ In a robustness check, Kang, Ding and Chaeronwong (2010) conduct a separate analysis for male directors but it is unclear whether the differences in market reactions between the male and female directors are statistically significant.

⁴ Their regression includes a non-CEO executive position dummy, an affiliate position dummy and an independent director position dummy all of which have positive and significant coefficients at greater than the 10% level. However, it is unclear what the omitted category is and how many observations are in the omitted category.

Although these problems can be at least partly overcome by collecting additional data from conventional sources, a problem that is not so easily overcome is the fact that, as Farrell and Hersch (2005) describe on p. 103, “most board additions occur either at scheduled board meetings that involve other information releases or are communicated through proxy mailings and ratified by shareholders at annual meetings”. This is a problem for all event studies around director appointments using US data, because it is difficult to disentangle the effect of director appointments from other confounding news. It may also lead to biases due to selection effects. We discuss the problems with this particular aspect of director appointments in more detail below and describe how the Australian institutional environment helps us address this problem.

2.3 Director appointment announcements

To put the problems associated with director appointment data into context, we briefly summarize the description of director elections in Rosenstein and Wyatt (1990). Typically, the board formally nominates and approves new director candidates at board meetings. The new board member may then begin serving immediately or sometime in the future. For the NYSE and AMEX firms they study, Rosenstein and Wyatt (1990) describe that the announcement of the appointment will often appear in the *Wall Street Journal* soon after board approval. However, they also note that for a subsample of 370 out of 1,251 of their director appointments the announcement appeared for the first time in the proxy statement in 24.9% cases. Prior to the next annual meeting, the name of the new director is added to the proxy along with the names of the incumbent directors and, assuming no opposition, the choice of new director is formally ratified by shareholders at the annual meeting.

This set-up poses several challenges for an event study of director appointments. Brickley (1986) finds positive and significant 2-day CARs around a random sample of 500 annual meeting dates. Similarly, Dimitrov and Jain (2011) document significantly positive abnormal CARs starting 40 days prior to and including the day of the annual meeting in a comprehensive sample of 26,307 annual meeting dates. They also show that managers appear to manage the timing and content of earnings announcements and management forecast announcements before annual meetings. They argue their evidence is consistent with the idea that managers systematically release good news prior to and at annual meetings in order to reduce shareholder criticism at the meetings. Since most proxy mailing dates will fall within this 40 day period,⁵ this means that the market reaction to director appointments that are first announced in proxy statements or at annual

⁵ Christoffersen, Geczy, Musto and Reed (2007) discuss that proxy statements will typically arrive 3 weeks after the median record date of 54 days prior to the annual meeting.

meetings may be contaminated by other news. On the other hand, Brickley (1986) points out that using “clean” proxy statements that only contain information about the election of directors, the ratification of auditors and, at most, miscellaneous shareholder proposals may cause a systematic selection bias due to the fact that the market may react to the absence of agenda items that were expected.

To avoid the problem of contaminating news several authors use only announcements of director appointments that are not first announced in the proxy statement, (e.g., Shivdasani and Yermack, 1999 and Fich, 2005). However, this introduces another possible selection bias as well as biases due to timing of news releases. Consistent with Rosenstein and Wyatt (1990), Shivdasani and Yermack (1999) report that 76% of announcements are made prior to the proxy statement and in Fich (2005) 75% of announcements are made prior to the proxy. However, to date the primary sources for announcements of director appointments prior to proxy statements are newspaper articles and press releases. Since small firms may receive less newspaper coverage than large firms, they may be more likely to be excluded when restricting samples to pre-proxy statement announcements. Moreover, Rosenstein and Wyatt (1990) suggest that pre-proxy announcements may be the result of timing. They find that the same firm will sometimes make an appointment announcement first in the proxy but at other times prior to the proxy. If firms time announcements depending on their expectation of the market’s reaction,⁶ abnormal returns around event dates may be systematically biased. Since female directors are generally in the minority and their appointments may attract more attention than the appointment of male directors, this may be a particularly serious problem for event studies trying to identify gender effects.

A final problem is that announcements of director appointments need not coincide with start dates. The sooner directors assume board service after the announcement; the more information may have already leaked to the market about the appointment. On the other hand, the later the director assumes service, the greater the uncertainty surrounding the ratification of the director at the annual meeting (although it is rare that elections are contested) or the ability of the director to assume service in the future.

In August of 2004, the SEC introduced a new rule requiring companies to disclose names of directors who are not elected at annual meetings or special meetings for that purpose in Item 5.02(d) of form 8-K within four business days. If companies fully complied with this rule, 8-K Item 5.02(d) dates would not be subject to biases due to sample selection and potential strategic

⁶ Recent evidence by Ahern and Sosyura (2011) also suggests that firms time press releases around mergers.

timing of announcements. However, a search of the Edgar database in August of 2010 using the search terms 8-K and 5.02(d) produced only 372 filings for the entire period from 2004 to 2010.⁷ This number is smaller than the samples of 626 and 1,493 pre-proxy announcements (that would be subject to disclosure on form 8-K post 2004) in Shivdasani and Yermack (1999) and Fich (2005), who each study 3 years of data, and the 702 pre-proxy announcements of audit committee members from 1993 to 2002 in Defond, Hann and Hu (2005). This suggests that either a greater proportion of appointments are occurring at annual meetings in recent years,⁸ which means that announcements will suffer from the problem of confounding news we point out above, or companies are not filing 8-K 5.02(d) forms consistently.⁹

The disclosure rules in Australia allow us to circumvent much of these problems with announcement dates. Director elections proceed in a similar fashion as in the US in the sense that directors can be appointed prior to the annual meeting subject to ratification at the annual meeting. However, unlike in the US, companies must disclose these appointments immediately to the ASX which then discloses the information to the market via its website. Specifically, the ASX listing rules, introduced in July of 1996, specify in item 3.16 that “an entity must tell the ASX immediately if there is a change to the chairperson, director, CEO or company secretary”. Item 15.7 requires that “An entity must not release information that is for release to the market to any person until it has given the information to ASX and has received an acknowledgment that ASX has released the information to the market”. Furthermore, the Australian Securities and Investments Commission (ASIC) can prosecute if companies breach their disclosure duty.¹⁰ ASIC has the power to issue companies with “infringement notices” that require the payment of a penalty of \$100,000 and to issue civil penalties of \$1 million.^{11 12} ASIC also has powers to pursue criminal convictions of individuals who fail to create and maintain a corporate culture of

⁷ There were 11 in 2004, 60 in 2005, 56 in 2006, 76 in 2007, 68 in 2008, 59 in 2009 and 42 until August of 2010.

⁸ The 372 8-K 5.02(d) filings also include appointments of insiders, such as the CEO, to the board which may be more likely to occur between annual meetings. Yermack (2006) reports that S&P 1500 firms appointed 1824 new outside directors between 2001 and 2003. If firms appointed similar numbers of outside directors after 2004 and 76% of them continued to be appointed between annual meetings, as suggested in Shivdasani and Yermack (1999), the number of 8-K 5.02(d)s for outside directors is significantly smaller than it should be.

⁹ Since issues labelled (a) though (e) must be disclosed via 8-Ks for Item 5.02, it is also possible that companies do not attach the proper label to their filings of director appointment announcements. However, this is nearly impossible to check as we identified a total of 98,142 filings for Item 5.02 of 8-Ks from 2004 to August 2010. A random check of these suggests that most of the ones that do not specifically refer to Item 5.02(d) concern compensation plans and director departures.

¹⁰ The relevant power is conferred by Part 9.4AA Corporations Act 2001.

¹¹ Under s. 1317DAA to 1317DAJ of the Corporations Act.

¹² Under s 1324B of the Corporations Act.

compliance with the relevant requirements,¹³ whereby custodial sentences of up to five years are possible. Stumm (2009) demonstrates that alleged breaches of disclosure requirements have been actively pursued by ASIC. For these reasons, our analysis proceeds on the basis that the announcements of director changes to the ASX are timely. However, we also check whether this assumption appears valid in Section 4.

Although announcement dates of director elections around annual meetings in Australia are likely to suffer from the same problem of confounding news as in the US, announcements of director appointments between annual meetings, which we will call interim appointments, will be relatively less subject to sample selection and timing biases than in the US. Furthermore, the ASX data allows us to restrict our sample to appointment announcements that are not simultaneously accompanied by the announcement of the departure of another director. For these reasons, the Australian data on director appointments is particularly suited for identifying the market reaction around female director appointments. An additional interesting feature of the Australian setting is that the ASX appointment announcements include information about the start date of the director and directors' initial equity interest in the company. We are unaware of any prior studies relating state dates to announcement dates, thus, beyond enabling us to conduct richer robustness tests, this information may be of interest in its own right.

3. Hypotheses about the market reaction to female directors

3.1 Predictions for the average stock price reaction to female director appointments

Different companies may have different reasons for appointing female directors. Some companies may not care about the gender of the candidate and appoint a woman simply because she is the best person for the job. For example, Harrigan (1981) shows that female directors are more prevalent in service-oriented, labour-intensive and women's product industries. Brammer et al. (2007) find the highest rates of female directors on UK boards are in the retailing, media and utilities sectors. The predominant explanation for these industry findings is that the highlighted industries generally have greater female participation in the workforce, which results in a greater pool of female candidates from which to select potential directors.

Other companies may appoint women precisely because they are women. As we discuss in the introduction, they may believe that women will provide new and different perspectives, increase the monitoring intensity of the board or help commit to, or credibly signal, a change in strategy. For example, Singh et al. (2008) show that new female and male director appointees to UK companies differ significantly in terms of qualifications and expertise. Female appointees are

¹³ Under s. 1311 of the Corporations Act and s. 678 of the Criminal Code.

more likely to possess MBA degrees but less likely to have corporate board experience. This suggests that female directors can bring different perspectives to the table which shareholders may value. However, studies such as Rosenstein and Wyatt (1990), DeFond, Hann and Hu (2005) and Fich (2005) also find that the market reaction to the appointment of directors varies systematically with their qualifications and expertise. Thus, to isolate gender effects, it is important to control for director characteristics.

Companies may also appoint female directors as symbolic gestures to appease stakeholders. Agrawal and Knoeber (2001) and Carter et al. (2003) document positive relationships between the representation of female directors on boards and both firm size and board size. They argue that larger firms have greater demands for diversity and more women may be attracted to the prestige of directorships in big firms. Firms with bigger boards also have more seats available for potential female directors. Farrell and Hersch (2005) also show the likelihood of adding a female director to the board is related to the gender composition of the hiring board, suggesting that boards may have gender targets or that female directors may prefer to serve on boards that already contain female directors.

Because of the diversity of company motives in appointing female directors, it is difficult to identify whether the gender of the director matters per se if we look at the average stock price reaction to the appointment of female directors in isolation. However, if we compare the stock price reaction of female to male director appointments, we may be able to isolate a gender effect.

If director appointments are *typically* gender-neutral, then we would expect no significant differences in the stock price reaction to male and female appointments on average. But, if gender generally matters for the appointment, we would expect to see significantly different stock price reactions to the appointment of female directors after controlling for other factors, such as director characteristics that are plausible proxies for experience and qualifications, board, firm and industry characteristics.

If female director appointments are typically not gender neutral but motivated primarily by tokenism accompanied by the isolation of female board members (Kanter, 1977), then we expect the average stock price reaction to female directors to be lower than the reaction to male directors after controlling for other factors. In this case, the company is paying to have a director on the board who does not have an impact. On the other hand, if the gender of the female director is an asset to the company because female directors can add value at the companies who appoint them by virtue of their different perspectives, values or behaviour expectations, we expect the market to react on average more positively to the appointment of female directors than to the appointment of male directors.

Of course, if female directors add value but the market anticipates that a female director will be appointed, we may not be able to detect abnormal returns to their appointments around announcement dates. However, if female directors are in short supply or if there is discrimination, so that the market does not expect that a female director will be appointed, we should observe a stock price reaction around their appointments. We may also observe a stock price reaction if their appointment is a signal of a change in strategy that is news to the market.

3.2 Variation in the stock price reaction

To gain more insight into the situations in which female directors may add value, we also examine variation in the stock price reaction to female directors conditional on board, firm and industry characteristics. We motivate our choices of characteristics by appealing to two arguments concerning the potential value of female directors. The first is the argument in Adams and Ferreira (2009) that female directors are more likely to exhibit the independence of thought expected of independent directors because they are not members of old-boys networks. Thus, we expect female appointees to be more valuable than male appointees when firms have greater monitoring needs. We examine this at three levels—the hiring board, the firm and the industry level.

The second is the argument Tate and Yang (2011) make that female directors may add value because they help resolve value-decreasing conflicts with stakeholders, in particular female employees. It is generally difficult to measure the importance of stakeholders. For example, standard databases do not typically contain information on the gender composition of firms' workforces. However, we attempt to provide some additional insight into the role of stakeholders using firm-level data from the Equal Opportunity for Women in the Workplace Agency (EOWA) which is a statutory governmental agency that administers the 1999 Australian Equal Opportunity for Women in the Workplace Act. The 1999 Act requires all private-sector companies and other organizations, such as universities, to report annually to EOWA on their equal opportunity for women practices. The reports cover items ranging from recruitment and promotion policies to policies for dealing with sexual harassment. Every year EOWA singles out companies that have particularly female-friendly workplace programs. Since companies with female-friendly workplace programs arguably have the most to gain from improved relations with their female employees, we use this information as a proxy for the importance of stakeholders.

Different interpretations of our results are possible. For example, a finding that female directors add value in large firms is consistent with the idea that female directors add value because of monitoring, because large firms are more complex and may require more board-level

monitoring. On the other hand, it is also consistent with the idea that female directors add value because they help resolve value-decreasing conflicts with stakeholders because large firms have more stakeholders. It is difficult to disentangle such effects because female directors may affect shareholder value for multiple reasons.

Characteristics of the appointing board

We expect that minority shareholders will benefit from additional monitoring if the hiring board is not already comprised of a majority of independent directors. Thus, we examine if the stock price reaction to female directors depends on board independence. We also examine the role of board size, the presence of female directors on the board and the presence of the CEO on the nominating committee. Although it is less clear how these variables relate to firms' monitoring needs, they may be associated with the ability of female directors to have an impact through monitoring. In particular, female directors may be less likely to be isolated on smaller boards and when the CEO has been involved in choosing them. It may also be easier for female board members to have an impact on boards with incumbent female directors, since the male board members may already be accustomed to working with women.

Company characteristics

At the company level, a number of studies relate the size and composition of corporate boards to monitoring-related factors such as company complexity and uncertainty (Boone et al., 2008; Coles et al., 2008; Lehn et al., 2009 and Linck et al., 2008). These studies argue that bigger companies require greater monitoring due to their more complex operations and that the costs of monitoring are larger in high growth companies (e.g., high market to book companies). If female directors are more valuable than male directors due to their superior monitoring ability then we expect their valuation premium to be higher in big companies and in firms with higher market-to-book ratios. Coles et al. (2008) and Linck et al. (2008) also use the ratio of debt to total assets as a measure of firm complexity; we follow the work of Harvey et al. (2004) who show that debt holders play a monitoring role. We propose that the superior monitoring ability of female directors is more valuable in companies with less debt.

Since large firms have more stakeholders, firm size may also be a proxy for the importance of stakeholders. Thus, both the monitoring and the stakeholder concern argument suggest that female directors should add value in larger firms. As additional measures of the importance of stakeholders, we use information from EOWA on the quality of firms' workplace practices. For each industry, EOWA ranks the top ten firms according to how innovative their equal opportunity practices are. In addition, every year employers can apply to be named an "EOWA Employer of Choice for Women". We use both of these measures separately as well as

combined as a measure of “EOWA recognition”. We also use information from EOWA indicating firms in the ASX 200 with two or more female executives as a measure of the importance of stakeholders.

Industry characteristics

It is not necessarily clear whether the need for board monitoring should vary across industries. However, since the financial crisis, policy makers have argued that companies in the financial sector may benefit from boardroom gender diversity because female directors may be able to provide a valuable independent perspective in an industry whose management is traditionally male dominated. For example, a 2006 EOWA report (EOWA, 2006) characterizes the finance sector in Australia as a “female-dominated workforce which is managed by a predominantly male executive” (p. 13). Moreover, Harriet Harman, UK Labour party’s number 2, famously argued that if Lehman Brothers had been Lehman sisters it would not have collapsed (Morris, 2009) and Michael Barnier, an EU commissioner, wants to impose gender quotas on bank boards (Treanor, 2011). Thus, it is of particular interest to examine whether female directors appear to add more value in the finance sector. Of course, female directors may also add value in the financial sector because they provide role models for lower-level female workers.

We also examine the natural resource sector because this is a particularly important industry sector in Australia that is also traditionally male dominated. For example, a 2011 EOWA report (EOWA, 2011) characterizes the mining industry as “male-dominated” based on data from 2009 (p. 2).

4. Data

4.1 Director appointments data

The ASX requires all listed companies to immediately notify the exchange if there is a change to a chairperson, director or CEO.¹⁴ These board changes are recorded in the ASX Company Announcement database which records dates and titles of all news announcements for ASX listed companies. Thomson Reuters’ Connect4 database organizes this information along with information from company annual reports into the Boardroom database. This database provides information about start dates, company codes, director names and position titles for all director appointments to ASX listed companies since the start of 2004.

In 2006, an organization called Women on Boards that was a leading advocate of introducing the diversity amendments to the 2010 Australian Corporate Governance Code

¹⁴ ASX listing rules 14.4 and 14.5 also require at least one director election each year and no director can serve more than 3 years without being put up for re-election.

became a public limited company. This enabled it to exert more pressure on public, private, not-for-profit and governmental boards to appoint female directors. Because we are interested in director appointments that are made in the absence of regulatory pressure to appoint women, we examine outside director appointments between January 1, 2004 and June 30, 2006.¹⁵ Examining outside director appointments over a 3-year window is also consistent with prior event studies around outside director appointments (e.g., Shivdasani and Yermack, 1999 and Fich, 2005).

To account for some of the issues of confounding news we describe in Section 2, we start by examining director appointments using three different samples. Our “all appointment” sample starts with 3,157 first-time outside director appointments to ASX-listed companies available in the Boardroom database in our sample period.¹⁶¹⁷ We then remove appointments for which we cannot confirm the announcement date of the appointment on the ASX Company Announcement database and for which there is insufficient share price data available from SIRCA, the standard provider of data on Australian shares, to calculate cumulative abnormal returns (CARs) based on the market model of Dodd and Warner (1983) for a three-day event window (-1,+1) around the announcement date.¹⁸ We end with 1,126 outside director appointments to 670 different companies, of which 67 are female appointees and 1,059 are male appointees.

To examine the effect of information released around the annual meeting on the market reaction to appointments, we examine a subsample of appointments around annual meeting dates. As in the US, in Australia new directors can be appointed by the board or first elected to the board by shareholders at annual general meetings.¹⁹ If they are appointed by the board, they must be ratified by shareholders at the next annual meeting. We obtain annual meeting dates for all

¹⁵ June 30 is the most common fiscal year end in Australia.

¹⁶ We downloaded the appointments in December 2006. We subsequently found that the Boardroom database from Connect4 goes back and creates appointment records for all directors of newly listed companies. This means the number of appointment records changes over time and some director appointment records are for companies before they are listed on the ASX. These appointments prior to ASX listing are not included in our subsequent samples as there are no company announcements for these records on the ASX Company Announcement database.

¹⁷ The Boardroom database only tracks changes, e.g. if a director enters or leaves the company or changes position, thus re-elections will not appear in our sample. Moreover, we only consider appointments that are classified as “new to company”.

¹⁸ Some early versions of the SIRCA database were affected by inaccuracies in the calculation of some dilution factors (e.g., in relation to stock splits), but these have now been corrected. As a robustness check, we repeat our analysis using dilution-adjusted returns from Datastream. We compare the daily dilution-adjusted returns of all sample observations in the (-30,+30) window around the announcement date and find daily return differences greater than 0.5% in 237 instances (out of a potential total of $1,166 \times 61 = 71,126$ daily returns). For our clean appointment sample we find 1 instance (out of a potential total of $429 \times 5 = 2,145$) of a return difference greater than 0.5% in the (-2,+2) window around the announcement date. Removal of this observation has no material effect on the results.

¹⁹ Corporations Act 2001 Section 201 and ASX listing rule 14.4. Directors appointed to the board by the board itself must not hold office without re-election past the next annual general meeting.

sample companies from the ASX Company Announcement database and examine the 96 appointments in the window (-15,+15) around these dates.²⁰ This sample contains 5 female directors and 91 male directors. Interestingly, only 31 of these (all male) were first elected by shareholders at the annual general meeting. This implies that only 2.75% of directors in our “all appointment sample” were first elected by shareholders. This is consistent with Rosenstein and Wyatt (1990), Shivdasani and Yermack (1999) and Fich (2005) who find that the majority of directors (~75%) are appointed to the board prior to the annual meeting rather than being first elected at the annual meeting. The percentage of directors first elected at the annual meeting is much lower in our sample. However, this may simply reflect the fact that our appointment information is more precise.

Finally, we construct a sample of “clean interim appointments”. We take all 1,095 appointments of directors who are not first elected at the annual meeting (“interim appointments”) and exclude observations within (-7,+7) days around the annual meeting. We also exclude observations associated with any other announcements made to the ASX (including resignations, other appointments and proxy dates) during the period from the day before to the day after the appointment announcement. We end with a sample of 423 interim appointments to 332 companies, of which 25 are appointments of female directors and 398 are appointments of male directors.²¹ Because the announcements in this sample are the least likely to be contaminated by other news, we focus primarily on this sample throughout the paper. To ensure that our results are not driven by a few individuals appointed to many boards, we verify that the interim appointments are for unique individuals for all but one woman (who was appointed to two boards) and for all but 15 men (12 of whom were appointed to two boards and three of whom were appointed to three boards).

We also obtain start dates from the appointment announcements. Table 1 shows summary statistics for the time lag between the appointment date and the annual meeting date, the start date and the annual meeting date and the announcement date and the start date for the “all appointment” and the “clean interim samples.”

-Insert Table 1 about here-

-Insert Figure 1 here-

²⁰ Most annual general meetings occur in November, followed by December, October, April and May. This is why a large number of appointments are in the months prior to annual meeting dates. If annual meetings are held in the same month each year then -11 and 1, -10 and 2, -9 and 3, etc, are the same periods.

²¹ There are 149 appointments from 2004, 183 appointments from 2005 and 91 appointments from 2006. The highest number of appointments is in May (52) and lowest in November (19). The only months without female appointments are June and November.

On average the announcement date is close to the start date (2.12 days prior) and at most 16 days afterwards in the “all appointments” sample.²² Figure 1 illustrates that the distribution of time lags between announcement and start dates are similar for male and female appointees in both the “all appointment” and the “clean interim” samples. This suggests that companies are diligent in abiding by the ASX disclosure rules and that our appointment data is relatively precise.²³ However, it is still possible that some companies time their appointment announcements. For example, companies could disclose appointments just prior to annual meetings to curry the favour of shareholders (e.g., Dimitrov and Jain, 2011) or avoid annual meeting dates if they anticipate that some appointments would be viewed as controversial. However, as is evident from Figures 2 and 3, the distributions of announcement and start dates are fairly even over the months leading up to the annual meeting. Furthermore, the distributions are similar for male and female appointments. Thus, we have no reason to believe that companies systematically circumvent the ASX disclosure requirement to time their announcements in general or particularly for female directors.

-Insert Figures 2 and 3 about here-

4.2 Director, board, firm and industry characteristics

We hand collect appointee director and hiring board characteristics from company annual reports on the Connect4 Annual Report database and appointment announcements. Because of the high data collection costs, we collect this information for the “clean interim” sample only. We obtain company financial data from the Aspect database. We adjust all board information to represent board characteristics at the time of the appointment.

Consistent with prior director appointment studies we discuss in Section 2.1, we code variables that proxy for director independence, occupation and qualifications. We distinguish between independent and non-independent outside directors based on company disclosures.²⁴ ASX Rule 3.19A.1 requires companies to report the equity interests of a director in the company at the time of appointment. Thus, we also code a dummy variable if the appointee holds shares in the hiring company when he or she is appointed (Equity) as an additional measure of shareholder

²² There was a time lag of 183 days between announcement and start date for a company that required regulatory approval to appoint a director. This director happened to be female.

²³ Although companies could alter the start date for timing issues, this is costly since they presumably have to start paying the director for board service from the start date.

²⁴ In Australia, companies voluntarily report directors as independent or non-independent based on ASX independence requirements. For more information see the ASX Corporate Governance Council’s Principles of Good Corporate Governance and Best Practice Recommendations, Box 2.1.

alignment.²⁵ We categorize appointee directors into the following occupation groups: academic, banker, consultant, executive, financial/accounting expert, lawyer, politician and current CEO of another listed company. As Australia has an abundance of mining and health-related companies, we also introduce the additional occupation groups of engineer, scientist and medical doctor.²⁶

Since directors in Australia are required by Section 300 of the Corporations Act 2001 to disclose their level of education and other relevant qualifications in annual reports, we are able to distinguish between directors that have obtained bachelor, master or PhD degrees. We code qualification variables as: no degree, law degree, other bachelor degrees, MBA, other master degrees and PhD.

Prior literature finds that the number of other directorships affects the stock price reaction to director appointments and departures (e.g., Ferris et al. 2003 and Fich and Shivdasani, 2006). We control for the effect of other directorships by coding a dummy variable (Board seats) to highlight appointees with two or more other directorships in addition to the new appointment.²⁷ Finally, we code a dummy that is equal to 1 if the appointee's board seat is a new board seat. We define a new board seat to be one where there was no announcement of a director departure from a non-executive position in the 3 months preceding the appointee's announcement.

We define CEO involved as a dummy equal to 1 if the CEO sits on the hiring board's nominating committee or if the hiring board does not have a nominating committee. Chair-CEO duality is a dummy equal to 1 if the same person holds both positions. We also code a dummy called Interlock that indicates the existence of interlocking directorships between the appointee and a member of the hiring board (i.e., they both serve on the board of another company).

To measure the diversity of the appointing board, we define three measures of appointing board diversity – gender diversity, occupation diversity and degree diversity. Gender diversity is the fraction of female directors on the board. Occupational and degree diversity are Herfindahl measures of diversity (i.e., sums of squared fractions of each classification, which means diversity decreases as they increase). The Appendix provides further detail about variable definitions.

Finally, we construct a measure of a firm's stakeholder concern by examining EOWA annual reports to determine if a company was named an EOWA business achievement award

²⁵ The equity interest is always disclosed in the later of the announcement date and the start date.

²⁶ Directors are allocated to occupation groups based on their descriptions in appointment announcements and annual reports. If a director has experience in two or more expertise groups, we use the classification in which the director has the most experience

²⁷ We also coded this variable in other ways, such as 1, 3 or 4 other directorships with no material effect on the results.

winner or an EOWA employer of choice for women.²⁸ We combine these dummy variables to create an EOWA recognition dummy variable.

Table 1 displays summary statistics for company characteristics in the “clean interim” sample. As the appointing firms come from the complete range of ASX-listed companies there is variation in size from a minimum of less than \$10 million in total assets to a maximum of \$411.31 billion. The median sample firm has total assets of \$50 million, return on assets of 0.66 percent, a market-to-book ratio of 2.11, debt-to-total-assets ratio of 0.33, a board size of 4 directors and board independence of 50%. The median hiring firm CEO has tenure of 3 years and is involved in the appointment of new directors in 83% of the observations. There is a 15% incidence of Chairman-CEO duality, which is much lower than the 58% reported by Linck et al. (2008) for US firms. The median Herfindahl indices for occupational diversity and gender diversity of the hiring board are 0.42 and 0.50, indicating that there is more occupational diversity than degree diversity on the board.

Only 3% of sample firms have EOWA recognition and 81% do not have a female director on their board. Sixteen percent of sample companies have one female director on their board and 3% of companies have two or more female directors on their boards. The proportion of female directors on hiring boards (Gender diversity) ranges from 0 to 60% with an average of 4%. Our sample firms are less gender diverse than in studies of boardroom diversity in the US. For example, over 50% of firms in the samples in Adams and Ferreira (2009) and Farrell and Hersch (2005) have female directors with an average proportion of female directors of 8-10%. However, boardroom diversity in large listed companies is generally lower in Australia than in the US. In 2006, there were 14.6% female directors in Fortune 500 companies (Catalyst, 2007) but only 8.7% in ASX 200 companies (EOWA, 2006). When we restrict our sample firms to the 83 ASX 200 companies, the average proportion of female directors rises to 8.67% consistent with the EOWA (2006) numbers. The percentage of female directors on the board in the remaining 340 firms in our sample is only 3.24%, which is statistically different from 8.67% at greater than the 1% level.

The most common occupation classifications of appointees are general business executives (35%) or bankers (17%). Most appointees (31%) have at least a BA degree, but, perhaps surprisingly, 30% have no degree. Fourteen percent of directors (5 female and 53 males) have an initial equity stake at appointment. The number of shares ranges from 1,000 to 30,000 for

²⁸ EOWA annual reports span two years. Thus we consider both annual reports incorporating the year of our data in coding this variable.

female appointees. For male appointees it ranges from 1,000 to 16,477,273. Appointments lead to board size expansions in 32% of cases.

4.3 Are female directors systematically different from male directors?

In Table 2 we examine whether female and male directors differ systematically in their characteristics and whether the boards and firms that appoint them differ systematically. We test whether the means (medians) of characteristics in Table 1 are different for female and male appointments using a Student's *t*-test (Mann-Whitney test). We observe that there are some statistically significant differences between female and male directors. In particular, female directors are more likely to be academics and to hold an MBA degree. Although the results for the other variables are not statistically significant, most likely due to the small number of observations in each group, some of the differences still appear to be economically meaningful. For example, the data suggests that female directors are less likely to be CEOs (0% as opposed to 5%), engineers (0% versus 9%) or scientists, but are more likely to hold any degree (84% as opposed to 70%) and more likely to hold a law degree (LLB). These results are consistent with Singh et al. (2008) who find that female board appointees generally have a higher level of education than male appointees. These differences suggest that it is important to control for occupational and educational differences in the event study.

-Insert Table 2 about here-

If female directors are primarily appointed because of tokenism, one might expect boards to create new director seats for them in order to leave the core group of directors intact. Perhaps surprisingly, in our sample female directors are more likely to fill a position that was vacant rather than a newly created position ("New seat" is 28% for female directors as opposed to 33% for male directors). However, female directors are more likely to be appointed to bigger boards. They are less likely to be appointed when the CEO sits on the nominating committee and when the board has lower degree diversity. Finally, female directors are more likely to be appointed in large firms and in firms with EOWA recognition (12% of female appointments as opposed to 2% of male appointments). To calculate the probability of female appointments we divide the number of female appointments by the total number of appointments. We find the average probability of a female appointment is 5.91%. In companies above the median firm size it is 8.02%. Where the CEO is not involved in the appointment process it is 11.11%. In companies with above median board degree diversity it is 9.86% and in financial sector companies it is 11.11%.

Since many board and firm characteristics are correlated with each other (e.g., firm size and board size) we examine which board and firm characteristics are related to the likelihood a

firm appoints a female director in a multivariate setting. We estimate the likelihood of a firm appointing a female director using probit regressions. We correct all standard errors for heteroskedasticity and group correlation at the firm level. We examine firm, board and industry characteristics separately in columns 1-3 of Table 3. In columns 4 and 5, we combine them using different measures of EOWA recognition. The coefficients on degree diversity and EOWA recognition are the most robust. Female directors are significantly more likely to be appointed in firms with greater degree diversity (at the 5% level) and in firms with EOWA recognition (at the 10% level). Other variables, such as firm size, lose their significance once we control for board characteristics. These results suggest that female directors may generally be appointed to firms that require different types of expertise. But they may also be appointed to firms that are concerned about workplace diversity.

-Insert Table 3 about here-

5. Does the market react differently to female director appointments?

The evidence in Table 2 suggests that female directors may fulfil specific needs in some firms. Thus, it is possible that the market may react positively to the appointment of female directors. However, it is not clear that the market reaction will be different for female directors than it is for male directors. We examine this issue in this section.

5.1 The market reaction to director appointments-unconditional analysis

We estimate abnormal returns around the announcement date using a market model. We estimate market model parameters from 250 trading days to 20 trading days prior to the announcement date using the All Ordinaries Accumulation Index which is the main market indicator for Australia's equity market and is based on the 500 largest ASX listed companies by market capitalisation. Table 4 shows CARs for a variety of event windows (-1,+1; -1,0 and -2,+2). We use *t*-tests and Wilcoxon signed rank tests to report the significance of the mean and median CARs from zero and we use *t*-tests and Mann-Whitney tests to report the significance of differences in mean and median CARs between female and male appointees.

-Insert Table 4 about here-

In Panel A, we present the CARs for the all appointment sample. This includes all annual meeting and interim appointments and does not distinguish between those associated with other company news or not. We find that the market reaction to all appointees is significantly positive

in two of six columns and the market reaction to male appointees is positive in only one column. However, the market reaction to female appointments is significantly positive in all cases. Furthermore, median CARs for female appointees are significantly higher than for male appointees. These results suggest that across all appointments, the market reaction to female appointments is generally more positive than male appointments. However, we need to be careful interpreting these results as the appointment of female directors could be systematically associated with other positive news announcements.

In the annual meeting appointment sample (Panel B) we find the market reaction to all appointees is generally insignificant, except over the (-2, 2) window. There is some evidence of a positive reaction to female directors and male directors separately, but there are no significant differences between male and female appointments. This is consistent with prior literature that documents insignificant market reactions around annual meeting dates (e.g., Farrell and Hersch, 2005). One reason may be because appointments around annual meetings may be contaminated by the systematic release of good news to coincide with the meeting. To examine this further we conduct an event study around the annual meeting dates in our sample. For our “all appointment” sample, we examine 759 annual meeting dates from 476 sample firms during the sample period (2004 to 2006).²⁹ The average CARs using a market model are all statistically significantly greater than zero, consistent with Brickley (1986).³⁰

To overcome concerns about contamination of the results, we provide results for our “clean interim” appointment sample in Panel C. We find that mean and median CARs for female appointees are always significantly greater than zero. For all appointees, the mean (-1,+1) CARs are also significant, but this seems to be driven by the female appointees. For male appointees, no CARs are significantly different from zero. Comparing CARs across gender, we find that the mean (-1,0) CAR and the median CARs for all event windows are significantly higher for female appointees than for male appointees.

Comparing the results of Panels A and C, we find that the market reaction to female appointees is always greater in the “clean interim” sample. Moreover, the difference between male and female appointees is greater for all but the median (-1,1) CAR in panel C. This suggests that it is important to eliminate confounding news to cleanly identify a gender effect in the market reaction around director appointment announcements.

²⁹ Sourced from brr.com.au.

³⁰ Around annual meeting dates we find CARs for the window (-1,+1) of 0.0064 (t=2.05), CARs for (-1,0) of 0.0063 (t=2.29) and CARs for (-2,+2) of 0.0065 (t=1.67).

In Table 5, we report the results of various robustness checks using the “clean interim” sample. To be consistent with Dimitrov and Jain (2011), we exclude all appointments 40 days prior to the annual meeting in Panel A. This leads to a loss of 17 observations, but the results are similar to those in Panel C of Table 4.

Panel B reports results using the constant mean return model (stock return minus average stock return during the estimation window) to calculate abnormal returns instead of the market model. The results are generally consistent with those in Panel C of Table 4. Mean and median CARs for female appointees are significantly greater than zero in five columns and mean and median (-1,0) CARs for female appointees are significantly higher than for male appointees.

-Insert Table 5 about here-

Panel C shows the results after removing the top and bottom 1% (5 observations each) of CARs from each column. Since excluding the outliers excludes only observations for male directors, it is not surprising that the results are again similar to those in Panel C of Table 4. In Panel D, we analyse a sub-sample of appointments where the hiring firms are not subject to thin trading on the ASX.³¹ We find that the differences between female and male CARs are still positive and statistically significant in 5 out of 6 columns.

5.2 Initial equity interest

One possible explanation for our results is that they are driven by family firms. Family firms tend to have more gender-diverse boards (Boytsun, Jorissen and van der Laan, 2011). Because female directors in family firms are generally family members, their appointment may signal the ability of the family to work together rather than the effect of gender on the board per se. While we do not have data on whether the companies in our sample are family firms or not, we try to rule out this alternative explanation using the initial equity interest of directors. If members of the family are appointed to the board of a family firm, their initial equity interest should be non-zero. Thus, we examine whether our results are robust to excluding directors with an initial equity position in Table 6. The results are again similar to those in Table 4. Thus, it does not appear as if family firms are driving our results.

-Insert Table 6 about here-

³¹ We identify firms subject to thin trading as those with less than 61 days of return observations in the 61 day (-30,+30) window around the appointment announcement.

5.3 Announcement versus start dates

A unique aspect of our data is that we have information on start dates of directors. If the announcement follows the start date of the director, then there may be little news in the announcement. Although the comparison of time lags in Table 1 suggests that time lags between announcement and start dates are not different for male and female directors on average, differences in the timing of appointments could still affect our results.³² We examine this issue in more detail for our “clean interim” sample. In Panel A of Table 7 we report the market reaction around the 112 announcements that follow start dates. The results suggest that there is little news in these announcements. Only the difference for the mean (-1,0) CAR is statistically significant (at the 5% level). In Panel B, we show the market reaction for announcements that coincide or precede start dates. In terms of patterns of statistical significance, the results are similar to those in Panel C of Table 4.³³ This is also the case if we exclude the announcements that coincide with start dates, except that the differences in CARs are not significant as often. This is most likely due to the fact that this subsample contains only 48 observations with 4 female directors.³⁴ These results suggest that there is more news in announcements preceding start dates and that the timing of the start date matters for detecting the market reaction to director appointments in general. However, the positive gender effect does not seem to be driven by systematic differences in timing between men and women. In fact, the percentage of female directors is greater in the sample of announcements following start dates (6.25%) than those preceding or coinciding with start dates (5.79%), which suggests that timing may be working against finding a gender effect rather than causing it. This interpretation is supported by the observation that the magnitudes of the differences in market reactions across gender are smaller in 5 columns than in Panel A of Table 4 and smaller in 4 columns than in Panel C of Table 4.

-Insert Table 7 about here-

5.4 Multivariate analysis of cumulative abnormal returns

In our initial analysis, we provide some evidence that the market reaction at the appointment of female directors is higher than that of male directors. This suggests that tokenism is not the primary reason for female director appointments. Instead, female directors appear to be

³² Differences in timing by gender may arise, for example, when boards need to fill a position quickly. In this case, the new director is more likely to be male because the supply of male directors is larger and the start date may precede the announcement date.

³³ The results are similar if we exclude the female director whose announcement preceded her start date by 183 days.

³⁴ All CARs for the sample and the mean and median (-1, 1) CARs for females and the (-1, 1) difference in median CARs are statistically significant at greater than the 10% level.

especially valuable. However, this is an unconditional result and may be due to other correlated factors, such as differences in expertise and qualifications between female and male directors that we highlighted earlier. We therefore continue our analysis of the value of female directors by controlling for other director characteristics.

-Insert Table 8 about here-

Table 8 presents multiple regression analyses of three different CAR specifications based on 3-day, 2-day and 5-day event windows. We examine all CARs even if the announcement happens after the start date to be consistent with prior literature. However, we control for timing effects by adding dummy variables for announcements pre- and post-start dates in our regressions. For each event window we estimate two models: one without occupational and degree dummy variables and one with. The unidentified occupation is “general business executives” and the unidentified qualification is “no degree”. We correct all standard errors for heteroskedasticity and group correlation at the firm level.

We find that firm and board characteristics are generally unrelated to the market reaction, but some director characteristics are. The coefficient on Board seats is positive and statistically significant (at the 10% level) across columns 1b, 2b and 3b. This suggests that in our sample the number of other directorships is an indication of director experience and quality rather than a representation of “busyness”. Negative coefficients on Consultant, Doctor and Politician in some specifications indicate that appointees with these types of professional expertise were associated with a loss in value (compared to the appointment of general business executives) in our sample companies. This result is consistent with the view that shareholders do not value directors with these specific types of expertise because these people can be hired by the company as specialists when needed rather than having them on the board in a full-time role.

Most importantly, in all but two specifications we find a significant positive coefficient on the female dummy variable. This is consistent with our univariate tests. The magnitudes of these coefficients indicate that the market reaction to the appointment of female directors is between 2.09% to 2.96% higher than the appointment of male directors even after controlling for director, board and firm characteristics. This suggests that female directors add value because of their gender, not because they happen to have different observable characteristics.³⁵ We examine potential mechanisms underlying this result in the following section.

³⁵ Results were similar in specifications with constant mean return CARs instead of market model CARs and excluding firms that were potentially subject to thin trading.

6. Why does gender matter?

We explore possible reasons why female directors may add value by examining whether the stock price reaction to female directors varies if we break our sample into subsets of firms with high or low monitoring needs and firms in which stakeholders are very important or not so important as in Section 3.2. We define Big firms to be firms with assets over \$500 million.³⁶ High MB and High Debt firms have market-to-book and debt greater than the median. We define Large board firms to be the quintile of firms with more than five directors.³⁷ Firms with Non-independent boards have less than a majority of independent directors. The Appendix provides further variable definitions. Because the sample of firms with EOWA recognition is small, we examine measures of stakeholder importance using EOWA data separately in Table 10.

-Insert Table 9 about here-

For each subsample, we re-estimate regression models a and b from Table 8 using both CAR(-1,+1) and CAR(-1,0) as dependent variables. Table 9 shows the results as well as the number of female directors in each subsample. The reaction to the appointment of female directors in firms with non-independent boards is significant only for CARS (-1,+1), model b, however the magnitudes of the reaction are always positive and much larger than for firms with independent boards regardless of the dependent variable. Similarly, the reaction for firms with small boards is significant only for CARS (-1,+1), model a, however the magnitudes of the reaction are always positive and much larger than for firms with large boards regardless of the dependent variable. The reaction generally appears positive and significant for Big firms and for High MB firms. The effects for firms in the Resources sector are particularly strong. On average, the market reaction to female director appointments in the Resources sector is between 8.67%-9.81% higher for female directors than male directors even after controlling for qualifications and experience measures. Although we expected to find that female directors add value in the Financial sector, the results are not significant. It is possible that our sample of director appointments in financial firms (45) is simply too small to be able to identify an effect.

-Insert Table 10 about here-

Overall, the evidence suggests that female directors may add value because of their monitoring ability. The results for Big firms are also consistent with the stakeholder concern argument. We provide additional evidence on the stakeholder concern argument by exploring the EOWA data in more depth. In Panels A and B of Table 10, we show the difference in the stock

³⁶ Due to the skewed nature of firm size, this isolates the largest quintile of firms. Splitting the sample at the median firm size of \$50 million is not as effective in differentiating between bigger and smaller firms.

³⁷ Similarly, this isolates the quintile of firms with larger boards (6-14 directors) from the remaining four quintiles of firms with smaller boards (2-5 directors).

market reaction to appointments of male and female directors for firms in the “all appointment sample” with and without EOWA recognition. In Panels C and D, we replicate this analysis for the “clean interim” sample. In Panels E and F, we replicate this analysis for the “clean interim” sample using additional information from EOWA censuses concerning the presence of at least two female executive managers. The EOWA censuses provide information for the ASX 200 concerning board and executive diversity. An executive manager is the most senior person in the organisation (e.g., CEO or Managing Director) and those who report directly to that person, including those based outside Australia. The censuses that overlap with our sample period are from 2004 and 2006. We consider a company to also have at least two female executives in 2005 if the company had at least two female executives in 2004 and 2006. The intersection between the ASX 200 and our “clean interim” sample consists of 83 appointments, 17 of which corresponded to firms with at least two female executives. As with EOWA recognition, we consider the presence of at least two female executives to be a proxy for the importance of female employees in the company and hence a proxy for the importance of stakeholders.

Although the samples in this analysis are small, the results are striking. The difference in the stock price reaction between female and male directors is consistently positive and significant only in those firms that we categorize as paying particular attention to stakeholders. Moreover, the magnitudes of these differences are extremely large. The market reaction to the appointment of female directors, as measured by $CAR(-1,+1)$, is 8.48% higher in Panel A, 11.18% higher in Panel C and 3.26% higher in Panel E than the market reaction to male directors. These magnitudes are particularly impressive since the results from Table 3 suggest that firms undertaking other steps to improve working conditions for their female employees are more likely to appoint a female director. Thus, the appointment of a female director should be less of a surprise in companies with EOWA recognition. Taken together, the findings from Table 3 and Table 10 suggest that female directors may add value by alleviating value-decreasing stakeholder conflicts.

7. Conclusion

Many countries are introducing initiatives to promote boardroom gender diversity. Since the benefits and costs of boardroom diversity quotas in publicly-traded companies are ultimately borne by shareholders, it is important to examine how they react to increases in gender diversity. We exploit a unique disclosure environment concerning director appointments and show that the average market reaction to the appointment of female directors is positive. Moreover, our results suggest that shareholders value gender per se. The average market reaction for female directors is

consistently higher than the reaction to male directors even after controlling for director, board, firm and industry characteristics. Our evidence suggests that shareholders may value female directors because they are better monitors and because they may alleviate value-decreasing stakeholder conflicts. In particular, the market reaction to the appointment of female directors in companies that have taken steps to improve working conditions for women is positive and economically much larger than the market reaction to male appointments.

Our results do not imply that all firms will benefit from greater boardroom diversity. Because we show that the gender of directors may be value-relevant when director appointments are voluntary, our evidence provides no direct support for or against boardroom diversity quotas. However, our results still have implications for the design of policy initiatives. The number of female director appointments in our sample is small. If gender can be value-relevant, then an appropriate policy target would be to find ways to expand the pool of suitable female director candidates. Doing so will enable policy makers to address concerns about equity and fairness as well as enabling firms to increase shareholder value.

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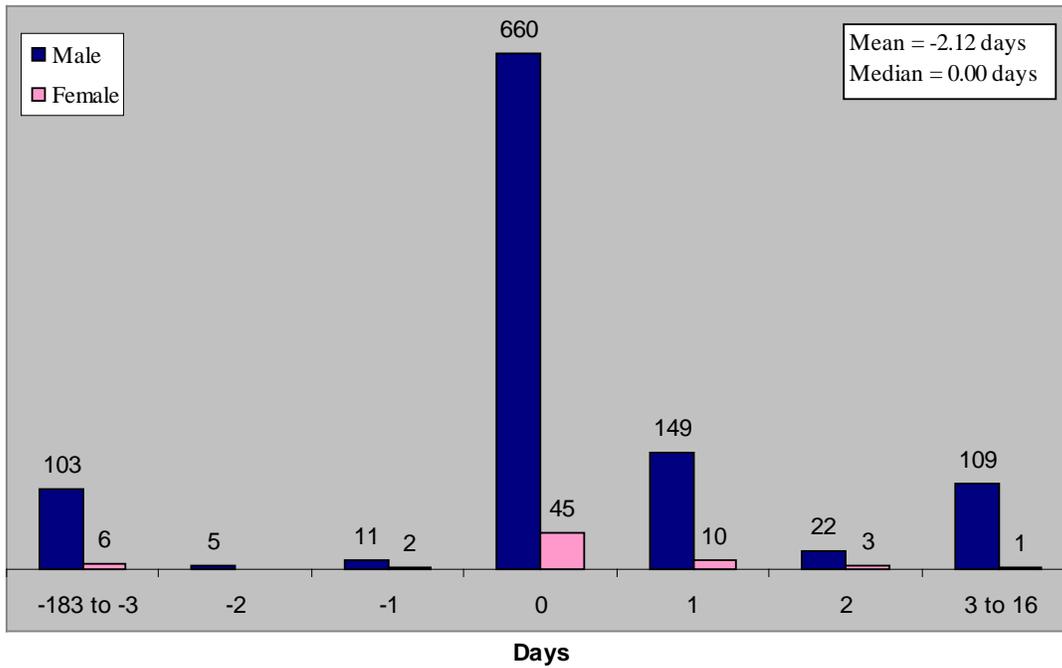
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Appendix – Variable Definitions

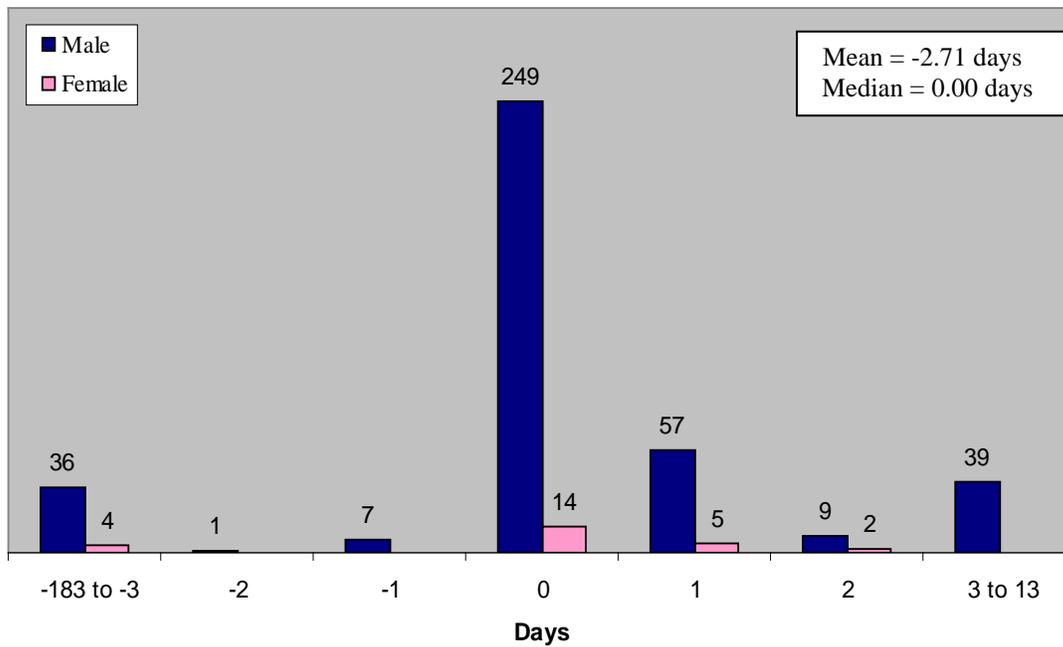
Variable	Definition
Female	Dummy variable equal to one if the gender of the appointee is female.
Academic	Dummy variable equal to one if the appointee's occupation is classified as an academic (current professorship).
Banker	Dummy variable equal to one if the appointee's occupation is classified as a banker (e.g. experience as an investment banker, commercial banker, funds manager).
CEO	Dummy variable equal to one if the appointee is currently the CEO of another listed company.
Consultant	Dummy variable equal to one if the appointee's occupation is classified as a consultant (e.g. management, IT or marketing).
Doctor	Dummy variable equal to one if the appointee's occupation is classified as medical doctor.
Engineer	Dummy variable equal to one if the appointee's occupation is classified as an engineer.
Executive	Dummy variable equal to one if the appointee's occupation is classified as a general executive/businessperson (not classified into another occupation group).
Financial	Dummy variable equal to one if the appointee's occupation is classified as a financial/accounting expert (e.g. experience as a CA, CPA, CFO).
Lawyer	Dummy variable equal to one if the appointee's occupation is classified as a lawyer (e.g. experience as a practicing lawyer).
Politician	Dummy variable equal to one if the appointee's occupation is classified as a politician (e.g. recent political office)
Scientist	Dummy variable equal to one if the appointee's occupation is classified as a scientist.
BA	Dummy variable equal to one if the appointee's highest degree is a bachelor degree.
LLB	Dummy variable equal to one if the appointee's highest degree is a law degree.
MA	Dummy variable equal to one if the appointee's highest degree is another Master degree.
MBA	Dummy variable equal to one if the appointee's highest degree is an MBA.
PHD	Dummy variable equal to one if the appointee's highest degree is a PhD.
Board seats	Dummy variable equal to one if the appointee has 2 or more other directorships.
Independent	Dummy variable equal to one if the appointee is classified as an independent director in the appointing company.
Equity	Dummy variable equal to one if the appointee holds shares in the appointing company.
Interlock	Dummy variable equal to one if there is an interlocking directorship between the appointing company and the other companies with which the appointee has directorships.

New seat	Dummy variable equal to one if the appointment is a new board seat (not replacing a resigning director within the past 3 months).
CEO involved	Dummy variable equal to one if the appointing company CEO is involved in the appointment process (no nomination committee or CEO is on nomination committee).
Chair-CEO duality	Dummy variable equal to one if the appointing company CEO is also the Chairman of the board of directors.
CEO tenure	Number of years the appointing company CEO has been in position.
Board size	Number of directors on the hiring board.
Board independence	Proportion of independent directors on the hiring board.
Independent board	Dummy variable equal to one if the appointing board is majority independent.
Occupation diversity	Herfindahl index of board occupations – sum of squared proportions of each occupation classification on the hiring board.
Degree diversity	Herfindahl index of board degrees – sum of squared proportion of each degree classification on the hiring board.
Gender diversity	Proportion of female directors on the hiring board.
Ln(Total Assets)	Natural logarithm of total assets of appointing company.
Return on Assets	Return on assets of appointing company (winsorized at 1 st percentile).
Market-to-book	Market to book ratio of appointing company (winsorized at 99 th percentile).
Debt to Total Assets	Ratio of debt to total assets of appointing company.
EOWA Recognition	Dummy variable equal to one if the hiring firm is either EOWA Employer Choice or EOWA Top 10.
EOWA Employer Choice	Dummy variable equal to one if the hiring firm is identified as an EOWA employer of choice for women
EOWA Top10	Dummy variable equal to one if the hiring firm is identified in the top10 in their industry for EOWA compliance
Financial sector	Dummy variable equal to one if the hiring firm is in the GICS = financial sector
Resources sector	Dummy variable equal to one if the hiring firm is in the GICS = mining or energy sectors
Industrial sector	Dummy variable equal to one if the hiring firm is in other remaining GICS sectors

Figure 1 - Difference between announcement dates and start dates in days
Panel A - All appointment sample



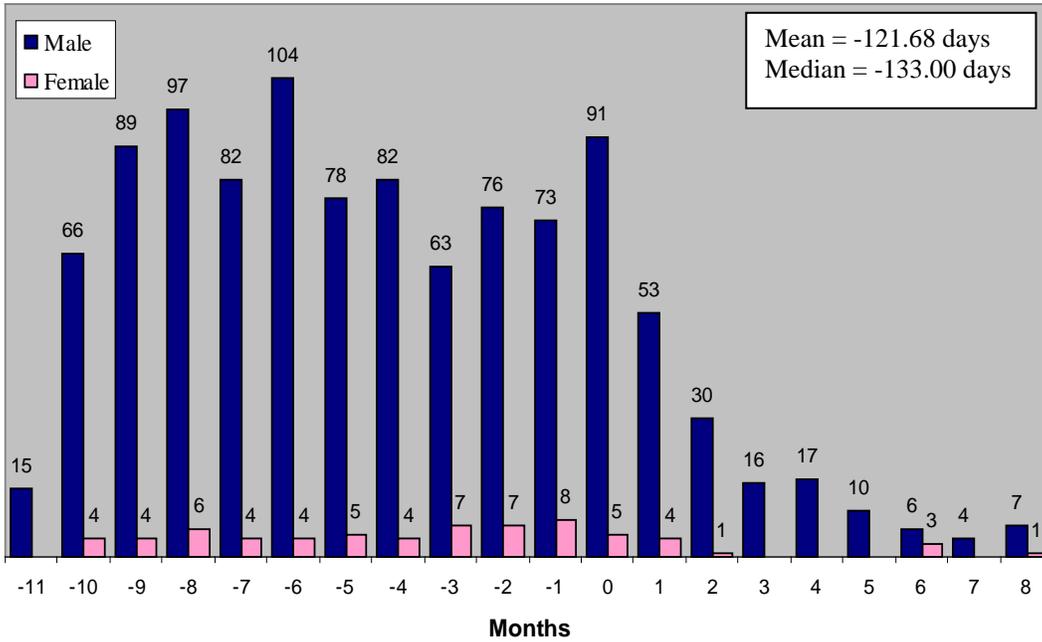
Panel B - Clean interim appointment sample



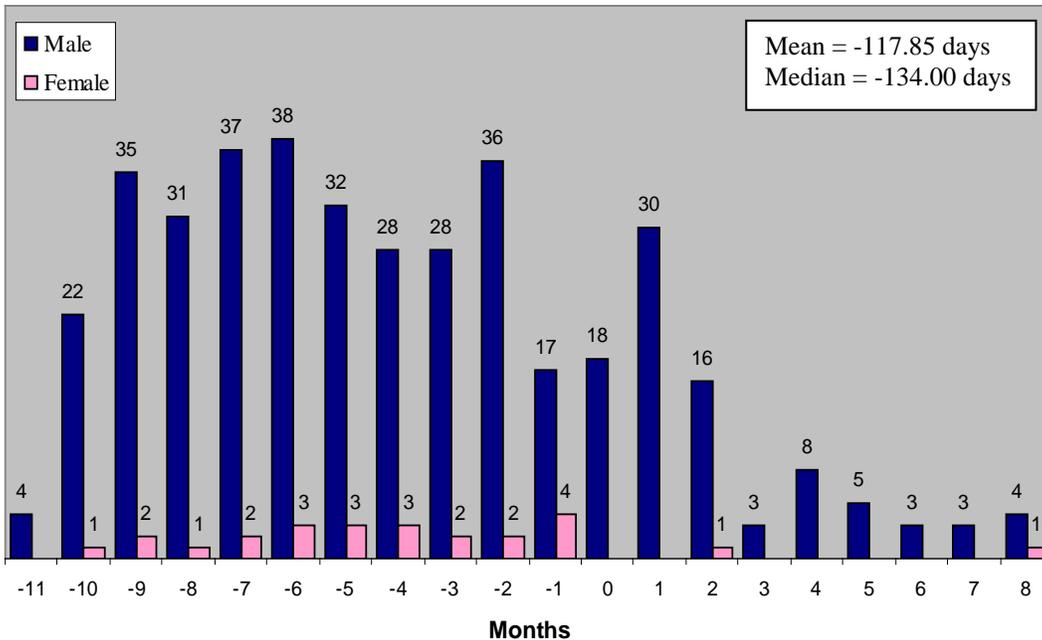
The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The clean interim sample consists of 423 interim appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs and with no confounding news between (-1,1) of the announcement date. Announcement date is the day the new director appointment was announced to the market on the Australian Stock Exchange Company Announcements database. Start date is the day the new appointee started their directorship.

Figure 2 – Difference between announcement dates and annual meeting dates in months

Panel A - All appointment sample

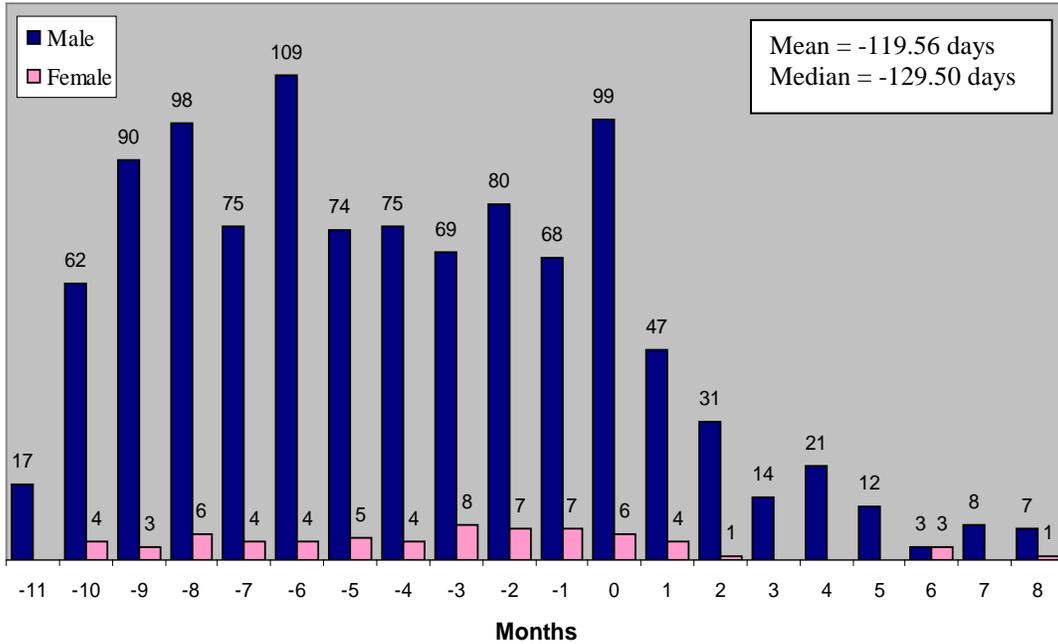


Panel B - Clean interim appointment sample

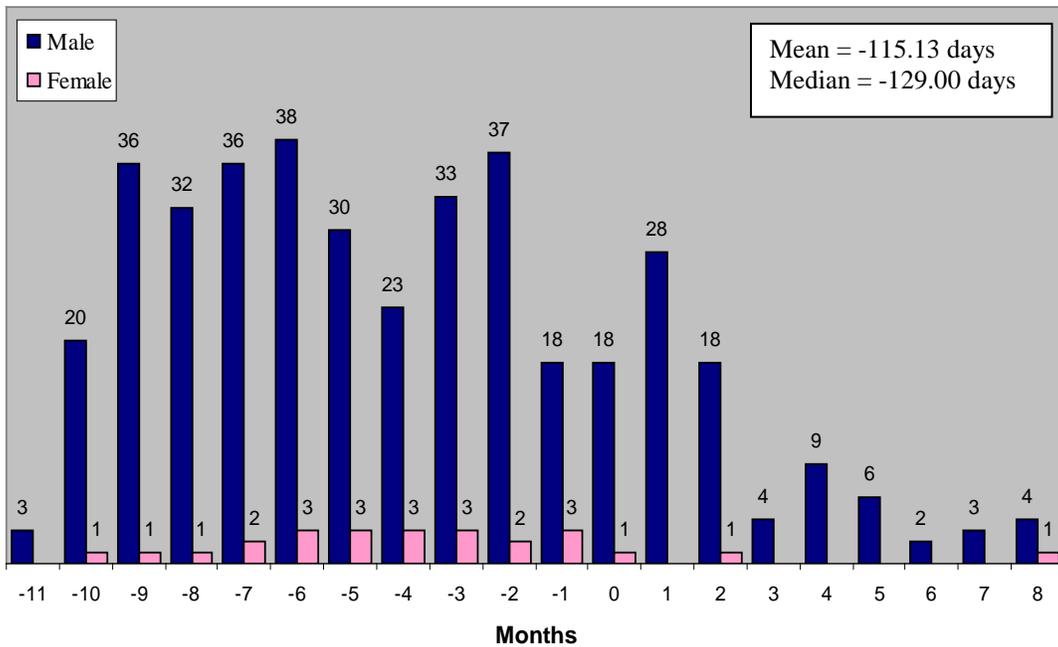


The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The clean interim sample consists of 423 interim appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs and with no confounding news between (-1,1) of the announcement date. Announcement date is the day the new director appointment was announced to the market on the Australian Stock Exchange Company Announcements database. Annual meeting date is the day of the annual general meeting in the same calendar year.

Figure 3 – Difference between start dates and annual meeting dates in months
Panel A - All appointment sample



Panel B - Clean interim appointment sample



The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The clean interim sample consists of 423 interim appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs and with no confounding news between (-1,1) of the announcement date. Start date is the day the new appointee started their directorship. Annual meeting date is the day of the annual general meeting in the same calendar year.

Table 1 – Summary Statistics

This table displays mean, median, minimum, maximum and standard deviation for appointment dates, appointee, hiring board, hiring firm and industry characteristics. The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The clean interim sample consists of 423 interim appointments with no confounding news between (-1,1) of the announcement date. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Board data is measured at the time of the director appointment. Hiring firm financial data is from Aspect. Announcement date is the day the new director appointment was announced to the market on the Australian Stock Exchange Company Announcements database. Start date is the day the new appointee started their directorship. Annual meeting date is the day of the annual general meeting in the same calendar year. Appointee occupation variables are mutually exclusive and degree variables are for highest degrees only. Board seats is a dummy variable equal to one if the appointee has two or more other directorships in listed companies. Independent is a dummy variable equal to one if the appointee joins as an independent non-executive director. Equity is a dummy variable equal to one if the appointee holds shares in the hiring firm. Interlock is a dummy variable equal to one if the appointee has an interlocking directorship with a hiring board director in another listed firm. New seat is a dummy variable equal to one if the appointment is a new board seat (not replacing a resigning director within the past 3 months). CEO involved is a dummy variable equal to one if the hiring firm CEO is involved in the appointment process (no nomination committee or CEO is on nomination committee). Occupation diversity is a Herfindahl index of board occupations – sum of squared proportions of each occupation classification on the hiring board. Degree diversity is a Herfindahl index of board degrees – sum of squared proportion of each degree classification on the hiring board. No female on board, one female on board and two or more females on board are dummy variables for hiring boards with these characteristics. Gender diversity is the proportion of female directors on the hiring board. EOWA Recognition is a dummy variable equal to one if the hiring firm is either EOWA Employer Choice or EOWA Top 10. EOWA Employer Choice is a dummy variable equal to one if the hiring firm is identified as an EOWA employer of choice for women. EOWA Top 10 is a dummy variable equal to one if the hiring firm is identified in the top10 in their industry for EOWA compliance. Industry sectors are dummy variables for firms in the financial (GICS=financial), resources (GICS=energy, materials) and industrial (other GICS classifications) industry sectors. See Appendix for other variable definitions.

	Mean	Median	Min	Max	Stdev
<u>Director Appointment Dates</u>					
<i>All appointment sample:</i>					
Announcement – start date	-2.12	0.00	-183	16	13.52
Announcement – annual meeting date	-121.68	-133.00	-327	237	122.38
Start – annual meeting date	-119.56	-129.50	-327	246	123.80
<i>Clean interim sample:</i>					
Announcement – start date	-2.71	0.00	-183	13	16.36
Announcement – annual meeting date	-117.85	-134.00	-319	235	125.40
Start – annual meeting date	-115.13	-129.00	-322	235	126.15
<u>Appointee Characteristics</u>					
Academic	0.02	0.00	0.00	1.00	0.14
Banker	0.17	0.00	0.00	1.00	0.38
CEO	0.05	0.00	0.00	1.00	0.21
Consultant	0.04	0.00	0.00	1.00	0.20
Doctor	0.01	0.00	0.00	1.00	0.10
Engineer	0.09	0.00	0.00	1.00	0.28
Executive	0.35	0.00	0.00	1.00	0.48
Financial	0.14	0.00	0.00	1.00	0.35
Lawyer	0.06	0.00	0.00	1.00	0.24
Politician	0.01	0.00	0.00	1.00	0.12
Scientist	0.06	0.00	0.00	1.00	0.23
BA	0.31	0.00	0.00	1.00	0.46
LLB	0.11	0.00	0.00	1.00	0.31
MA	0.09	0.00	0.00	1.00	0.29
MBA	0.09	0.00	0.00	1.00	0.29
PHD	0.10	0.00	0.00	1.00	0.30
No degree	0.30	0.00	0.00	1.00	0.46
Board seats	0.18	0.00	0.00	1.00	0.38

Independent	0.80	1.00	0.00	1.00	0.40
Equity	0.14	0.00	0.00	1.00	0.34
Interlock	0.05	0.00	0.00	1.00	0.22
New seat	0.32	0.00	0.00	1.00	0.47
<u>Board Characteristics</u>					
Board Size	4.53	4.00	2.00	14.00	1.91
Board Independence	0.46	0.50	0.00	1.00	0.26
CEO involved	0.83	1.00	0.00	1.00	0.38
CEO tenure (yrs)	5.00	3.00	0.00	26.00	5.19
Chair-CEO duality	0.14	0.00	0.00	1.00	0.35
Occupation diversity	0.46	0.43	0.19	1.00	0.18
Degree diversity	0.54	0.50	0.21	1.00	0.22
No Female on Board	0.81	1.00	0.00	1.00	0.40
One Female on Board	0.16	0.00	0.00	1.00	0.36
Two or more Females on Board	0.03	0.00	0.00	1.00	0.18
Gender diversity	0.04	0.00	0.00	0.60	0.10
<u>Firm Characteristics</u>					
Total Assets (billions)	2.94	0.05	0.00	411.31	23.93
Return on Assets (%)	-11.18	0.46	-100	42.66	30.97
Market-to-Book ratio	3.07	2.12	0.10	10.00	2.60
Debt to Total Assets	0.35	0.33	0.01	1.00	0.26
EOWA Recognition	0.03	0.00	0.00	1.00	0.16
EOWA Employer Choice	0.02	0.00	0.00	1.00	0.13
EOWA Top 10	0.01	0.00	0.00	1.00	0.10
<u>Industry Sectors</u>					
Financial sector	0.11	0.00	0.00	1.00	0.31
Resources sector	0.34	0.00	0.00	1.00	0.47
Industrial sector	0.55	1.00	0.00	1.00	0.50

Table 2 – Characteristics of Female versus Male Appointments

Differences in appointee, hiring firm, hiring board and industry sector characteristics between female and male appointees. The sample comprises 423 clean interim outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Hiring firm financial data is from Aspect. Industry sectors are dummy variables for firms in the financial (GICS=financial), resources (GICS=energy, materials) and industrial (other GICS classifications) industry sectors. See Appendix for other variable definitions. Mean tests are t-tests for differences in means. Mann-Whitney Tests are tie-adjusted for dummy variables. Significance at * 10%, ** 5% and *** 1%.

	Mean tests			Mann-Whitney tests		
	Female	Male	t-statistic	Female	Male	u-statistic
<u>Director Appointment Dates</u>						
Announcement – start date	-9.00	-2.32	-1.99**	0.00	0.00	0.44
Announcement – annual meeting date	-120.80	-117.68	-0.12	-124.00	-135.00	0.01
Start – annual meeting date	-111.80	-115.34	0.14	-119.00	-131.50	0.26
<u>Appointee Characteristics</u>						
Academic	0.08	0.02	2.10**	0.00	0.00	2.09**
Banker	0.24	0.17	0.96	0.00	0.00	0.95
CEO	0.00	0.05	-1.15	0.00	0.00	-1.14
Consultant	0.04	0.04	-0.07	0.00	0.00	-0.06
Doctor	0.00	0.01	-0.50	0.00	0.00	-0.50
Engineer	0.00	0.09	-1.60	0.00	0.00	-1.59
Executive	0.48	0.34	1.43	0.00	0.00	1.43
Financial	0.08	0.14	-0.88	0.00	0.00	-0.88
Lawyer	0.08	0.06	0.34	0.00	0.00	0.34
Politician	0.00	0.02	-0.61	0.00	0.00	-0.61
Scientist	0.00	0.06	-1.26	0.00	0.00	-1.26
BA	0.20	0.32	-1.27	0.00	0.00	-1.27
LLB	0.20	0.10	1.57	0.00	0.00	1.56
MA	0.08	0.09	-0.22	0.00	0.00	-0.22
MBA	0.20	0.09	1.86*	0.00	0.00	1.85*
PHD	0.16	0.09	1.10	0.00	0.00	1.10
No degree	0.16	0.30	-1.53	0.00	0.00	-1.53
Board seats	0.12	0.18	-0.80	0.00	0.00	-0.80
Independent	0.80	0.80	0.04	1.00	1.00	0.04
Equity	0.20	0.13	0.94	0.00	0.00	0.94
Interlock	0.04	0.05	-0.28	0.00	0.00	-0.28
New seat	0.28	0.33	-0.48	0.00	0.00	-0.48
<u>Board Characteristics</u>						
Board Size	5.24	4.49	1.91*	5.00	4.00	2.76***
Board Independence	0.50	0.46	0.81	0.50	0.50	0.81
CEO involved	0.68	0.84	-2.06**	1.00	1.00	-2.05**
CEO tenure (yrs)	5.56	4.97	0.55	3.00	3.00	0.24
Chair-CEO duality	0.04	0.15	-1.53	0.00	0.00	-1.53
Occupation diversity	0.45	0.46	-0.45	0.39	0.43	-0.47
Degree diversity	0.39	0.55	-3.50***	0.36	0.52	-4.14***
Gender diversity	0.06	0.04	1.14	0.00	0.00	0.61

<u>Firm Characteristics</u>						
Total Assets (billions)	1.81	3.01	-0.24	0.18	0.04	1.65*
Return on Assets (%)	-5.40	-11.54	0.96	4.25	-0.05	1.07
Market-to-Book ratio	3.76	3.03	1.36	2.87	2.11	1.48
Debt to Total Assets	0.41	0.35	1.06	0.41	0.33	1.13
EOWA Recognition	0.12	0.02	3.07***	0.00	0.00	3.04***
EOWA Employer Choice	0.08	0.01	2.58**	0.00	0.00	2.56**
EOWA Top 10	0.04	0.01	1.63	0.00	0.00	1.62
<u>Industry Sectors</u>						
Financial sector	0.20	0.10	1.57	0.00	0.00	1.56
Resources sector	0.24	0.35	-1.09	0.00	0.00	-1.09
Industrial sector	0.56	0.55	0.07	1.00	1.00	0.07

Table 3 – Likelihood of Female Appointments

Probit models relating choice of female appointee to hiring firm, hiring board and industry sector characteristics. The sample comprises 423 clean interim outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Hiring firm financial data is from Aspect. Industry sectors are dummy variables for firms in the financial (GICS=financial), resources (GICS=energy, materials) and industrial (other GICS classifications) industry sectors. See Appendix for other variable definitions. Models include firm clustered and robust standard errors. Z-statistics are shown in parentheses. Significance at * 10%, ** 5% and *** 1%.

	Probit: Female appointee				
	(1)	(2)	(3)	(4)	(5)
Intercept	-1.9983 (-6.91)***	0.0335 (0.04)	-1.5562 (-11.93)***	0.1113 (0.16)	0.1577 (0.23)
Ln(Total Assets)	0.0347 (0.65)			-0.0459 (-0.59)	-0.0512 (-0.67)
Return on Assets	0.2916 (0.73)			0.3318 (0.87)	0.3319 (0.88)
Market-to-Book	0.0716 (1.89)*			0.0563 (1.35)	0.0533 (1.29)
Debt to Total Assets	0.0602 (0.15)			-0.2046 (-0.46)	-0.1660 (-0.38)
EOWA Recognition	0.8789 (1.94)*			1.0452 (1.82)*	
EOWA Employer choice					1.2200 (1.70)*
EOWA Top 10					0.7542 (1.01)
Board Size		-0.0323 (-0.58)		-0.0235 (-0.38)	-0.0215 (-0.35)
Independent Board		-0.0207 (-0.10)		0.0510 (0.23)	0.0461 (0.21)
CEO involved		-0.4236 (-1.72)*		-0.4457 (-1.62)	-0.4196 (-1.51)
CEO tenure (yrs)		0.0118 (0.62)		0.0038 (0.19)	0.0055 (0.28)
Chair-CEO duality		-0.4946 (-1.08)		-0.5274 (-1.19)	-0.5357 (-1.20)
Occupation diversity		-0.1188 (-0.21)		-0.1463 (-0.30)	-0.2160 (-0.43)
Degree diversity		-2.3264 (-1.98)**		-2.3367 (-2.50)**	-2.3954 (-2.69)***
Gender diversity		0.3255 (0.31)		-0.1808 (-0.13)	-0.2143 (-0.16)
Financial sector			0.3356 (1.20)	0.3043 (0.91)	0.3091 (0.93)
Resources sector			-0.1755 (-0.77)	-0.1169 (-0.47)	-0.1318 (-0.52)
McFadden-R ²	0.050	0.105	0.014	0.146	0.147
n	423	423	423	423	423

Table 4 – All Appointment, Annual Meeting and Clean Interim Sample CARs

This table shows mean and median cumulative abnormal returns (CARs) based on the market model over three different announcement periods (-1,+1), (-1,0) and (-2,+2) for all appointments and by gender of the appointee. The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The annual meeting sample consists of 96 appointments within (-15,+15) of annual meeting dates. The clean interim sample consists of 423 interim appointments with no confounding news between (-1,1) of the announcement date. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Share price data is sourced from Circa. In parentheses, t-tests and Wilcoxon signed rank tests are used to report the significance of the mean and median CARs from zero for all, female and male appointments and t-tests and Mann-Whitney tests are used to report the significance of differences in mean and median CARs between female and male appointees. Significance is reported at * 10%, ** 5% and *** 1%.

	Mean CARs			Median CARs		
	-1,+1	-1,0	-2,+2	-1,+1	-1,0	-2,+2
<i>Panel A – All appointment sample</i>						
All (1126)	0.0069 (2.69)***	0.0046 (1.99)**	0.0036 (1.13)	0.0005 (1.60)	-0.0008 (-0.25)	-0.0029 (-0.66)
Female (67)	0.0198 (3.12)***	0.0186 (3.05)***	0.0194 (2.48)**	0.0098 (2.90)***	0.0038 (2.77)***	0.0083 (1.76)*
Male (1059)	0.0060 (2.25)**	0.0037 (1.51)	0.0026 (0.78)	-0.0002 (-0.97)	-0.0011 (-0.39)	-0.0031 (-1.07)
Difference	0.0138 (1.28)	0.0149 (1.56)	0.0168 (1.24)	0.0100 (2.38)**	0.0049 (2.66)***	0.0114 (1.93)*
<i>Panel B – Annual meeting appointment sample</i>						
All (96)	0.0106 (1.15)	0.0047 (0.75)	0.0175 (1.86)*	0.0072 (0.96)	0.0048 (1.31)	0.0047 (1.68)*
Female (5)	0.0243 (2.75)*	0.0245 (2.29)*	0.0077 (0.73)	0.0267 (1.61)	0.0267 (1.89)*	0.0050 (0.54)
Male (91)	0.0098 (1.01)	0.0036 (0.54)	0.0181 (1.82)*	0.0064 (0.66)	0.0048 (0.97)	0.0044 (1.63)
Difference	0.0145 (0.35)	0.0209 (0.75)	-0.0104 (0.24)	0.0203 (1.17)	0.0219 (1.17)	0.0006 (0.16)
<i>Panel C – Clean interim appointment sample</i>						
All (423)	0.0063 (1.65)*	0.0003 (0.10)	0.0039 (0.84)	0.0026 (1.33)	-0.0014 (0.88)	0.0003 (0.16)
Female (25)	0.0261 (2.09)**	0.0223 (1.72)*	0.0317 (2.05)*	0.0099 (2.39)**	0.0071 (1.78)*	0.0217 (1.78)*
Male (398)	0.0051 (1.27)	-0.0011 (-0.33)	0.0022 (0.45)	0.0012 (0.83)	-0.0020 (-1.35)	-0.0014 (-0.29)
Difference	0.0210 (1.30)	0.0234 (1.77)*	0.0295 (1.48)	0.0087 (1.89)*	0.0091 (1.90)*	0.0231 (1.85)*

Table 5 – Robustness Checks

This table shows mean and median cumulative abnormal returns (CARs) over three different announcement periods (-1,+1), (-1,0) and (-2,+2) for all appointments and by gender of the appointee. The sample consists of 423 clean interim announcements of outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Panel A excludes observations between -40 and 0 of annual meeting dates. Panel B uses the constant mean return model instead of the market model to calculate CARs. In Panel C, the top and bottom 1% of observations (5+5=10) are removed. In Panel D, the sub-sample includes appointing firms without thin trading concerns (appointing firms with 61 days of return data in the 61 day period around the announcement). Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Share price data is sourced from Sirca. In parentheses, t-tests and Wilcoxon signed rank tests are used to report the significance of the mean and median CARs from zero for all, female and male appointments and t-tests and Mann-Whitney tests are used to report the significance of differences in mean and median CARs between female and male appointees. Significance is reported at * 10%, ** 5% and *** 1%.

	Mean Returns			Median Returns		
	-1,+1	-1,0	-2,+2	-1,+1	-1,0	-2,+2
<i>Panel A – Excluding observations before annual meetings (-40,0)</i>						
All (406)	0.0046 (1.21)	-0.0006 (-0.19)	0.0023 (0.48)	0.0020 (0.90)	-0.0020 (-1.40)	-0.0008 (-0.18)
Female (23)	0.0269 (1.98)*	0.0223 (1.59)	0.0342 (2.10)**	0.0099 (2.17)**	0.0071 (1.66)*	0.0217 (1.87)*
Male (383)	0.0033 (0.83)	-0.0020 (-0.61)	0.0004 (0.08)	0.0007 (0.44)	0.0022 (-1.78)*	-0.0021 (-0.64)
Difference	0.0236 (1.43)	0.0243 (1.75)*	0.0338 (1.64)*	0.0092 (1.86)*	0.0093 (1.88)*	0.0238 (2.00)**
<i>Panel B – Constant Mean Return Model</i>						
All (423)	0.0066 (1.69)*	0.0005 (0.16)	0.0031 (0.65)	0.0022 (1.37)	-0.0004 (-0.85)	-0.0019 (-0.07)
Female (25)	0.0250 (1.91)*	0.0228 (1.76)*	0.0284 (1.78)*	0.0112 (2.04)**	0.0086 (1.94)*	0.0074 (1.26)
Male (398)	0.0055 (1.34)	-0.0009 (-0.28)	0.0015 (0.30)	0.0017 (0.93)	-0.0013 (-1.30)	-0.0021 (-0.41)
Difference	0.0195 (1.18)	0.0237 (1.79)*	0.0269 (1.32)	0.0095 (1.57)	0.0099 (2.02)**	0.0095 (1.43)
<i>Panel C – Removing Outliers</i>						
All (413)	0.0052 (1.74)*	0.0006 (0.23)	0.0029 (0.73)	0.0026 (1.37)	-0.0011 (-0.70)	0.0003 (0.15)
Female (25)	0.0261 (2.09)**	0.0223 (1.72)*	0.0317 (2.05)*	0.0099 (2.39)**	0.0071 (1.78)*	0.0217 (1.78)*
Male (388)	0.0038 (1.25)	-0.0008 (-0.31)	0.0010 (0.25)	0.0012 (0.86)	-0.0016 (-1.12)	-0.0014 (0.31)
Difference	0.0223 (1.79)*	0.0231 (2.17)**	0.0307 (1.89)*	0.0087 (1.94)*	0.0087 (1.87)*	0.0231 (1.89)*
<i>Panel D – No Thin Trading</i>						
All (219)	-0.0002 (-0.04)	0.0002 (0.05)	-0.0074 (-1.34)	0.0005 (0.20)	-0.0008 (-0.59)	-0.0037 (-0.95)
Female (19)	0.0197 (1.60)	0.0238 (1.43)	0.0304 (1.90)*	0.0099 (1.95)*	0.0071 (1.63)	0.0241 (1.75)*
Male (200)	-0.0020 (-0.45)	-0.0021 (-0.55)	-0.0110 (-1.89)*	-0.0006 (-0.39)	-0.0013 (-1.05)	-0.0046 (-1.59)
Difference	0.0217 (1.44)	0.0259 (1.97)*	0.0414 (2.12)**	0.0105 (2.01)**	0.0084 (1.73)*	0.0287 (2.25)**

Table 6 – Equity Interest at Appointment

This table shows mean and median cumulative abnormal returns (CARs) based on the market model over three different announcement periods (-1,+1), (-1,0) and (-2,+2) for all appointments and by gender of the appointee. The sample consists of 423 clean interim announcements of outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Panel A shows results where appointees own shares in the hiring company at appointment. Panel B show results where appointees do not own shares in the hiring company at appointment. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Share price data is sourced from Sirca. In parentheses, t-tests and Wilcoxon signed rank tests are used to report the significance of the mean and median CARs from zero for all, female and male appointments and t-tests and Mann-Whitney tests are used to report the significance of differences in mean and median CARs between female and male appointees. Significance is reported at * 10%, ** 5% and *** 1%.

	Mean CARs			Median CARs		
	-1,+1	-1,0	-2,+2	-1,+1	-1,0	-2,+2
<i>Panel A – Appointees with Equity Interest</i>						
All (58)	0.0130 (0.96)	0.0106 (1.10)	0.0249 (1.54)	0.0077 (1.84)*	0.0042 (0.97)	0.0118 (1.83)*
Female (5)	0.0204 (1.73)	0.0057 (0.37)	0.0293 (1.12)	0.0148 (1.35)	-0.0014 (0.00)	0.0217 (1.08)
Male (53)	0.0123 (0.83)	0.0110 (1.05)	0.0245 (1.39)	0.0075 (1.54)	0.0052 (1.06)	0.0085 (1.66)*
Difference	0.0081 (0.17)	-0.0053 (-0.15)	0.0048 (0.08)	0.0073 (0.61)	-0.0066 (-0.47)	0.0132 (0.30)
<i>Panel B – Appointees with no Equity Interest</i>						
All (365)	0.0052 (1.35)	-0.0013 (-0.40)	0.0006 (0.13)	0.0007 (0.69)	-0.0021 (-1.38)	-0.0016 (-0.57)
Female (20)	0.0275 (1.78)*	0.0264 (1.68)	0.0323 (1.74)*	0.0088 (2.00)**	0.0093 (2.15)**	0.0267 (1.44)
Male (345)	0.0039 (0.98)	-0.0029 (-0.88)	-0.0012 (-0.25)	0.0004 (0.28)	-0.0026 (-1.82)*	-0.0026 (-0.97)
Difference	0.0236 (1.38)	0.0293 (2.06)**	0.0335 (1.59)	0.0084 (1.71)*	0.0119 (2.21)**	0.0293 (1.74)*

Table 7 – Announcement versus Start Dates

This table shows mean and median cumulative abnormal returns (CARs) based on the market model over three different announcement periods (-1,+1), (-1,0) and (-2,+2) for all appointments and by gender of the appointee. The sample consists of 423 clean interim announcements of outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Panel A shows results where the announcement date is after the start date. Panel B show results where the announcement date is before or on the start date. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Share price data is sourced from Sirca. In parentheses, t-tests and Wilcoxon signed rank tests are used to report the significance of the mean and median CARs from zero for all, female and male appointments and t-tests and Mann-Whitney tests are used to report the significance of differences in mean and median CARs between female and male appointees. Significance is reported at * 10%, ** 5% and *** 1%.

	Mean CARs			Median CARs		
	-1,+1	-1,0	-2,+2	-1,+1	-1,0	-2,+2
<i>Panel A – Announcement after Start Date</i>						
All (112)	-0.0011 (-0.17)	-0.0039 (-0.67)	0.0015 (0.17)	0.0009 (0.03)	-0.0043 (-1.24)	-0.0041 (-0.01)
Female (7)	0.0226 (0.68)	0.0509 (1.16)	0.0162 (0.46)	0.0099 (0.59)	0.0095 (1.10)	0.0266 (0.08)
Male (105)	-0.0027 (-0.42)	-0.0076 (-1.39)	0.0006 (0.06)	0.0004 (0.11)	-0.0050 (-1.55)	-0.0045 (-0.12)
Difference	0.0253 (0.90)	0.0585 (2.46)**	0.0156 (0.41)	0.0095 (0.58)	0.0145 (1.60)	0.0311 (0.24)
<i>Panel B – Announcement before or on Start Date</i>						
All (311)	0.0090 (1.95)*	0.0018 (0.50)	0.0048 (0.88)	0.0031 (1.58)	-0.0008 (-0.27)	0.0008 (0.22)
Female (18)	0.0274 (2.20)*	0.0111 (1.76)*	0.0378 (2.21)**	0.0113 (2.57)**	0.0054 (1.26)	0.0202 (1.96)**
Male (293)	0.0078 (1.63)	0.0013 (0.33)	0.0028 (0.49)	0.0024 (1.08)	-0.0009 (-0.56)	-0.0006 (-0.26)
Difference	0.0196 (1.00)	0.0098 (0.63)	0.0350 (1.49)	0.0089 (1.86)*	0.0063 (1.25)	0.0208 (1.98)**

Table 8 – CARs and Gender

Regressions relate CARs (-1,+1), (-1,0) and (-2,+2) to gender of appointee, other director characteristics and control variables. The sample comprises 423 interim outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Hiring firm financial data is from Aspect. Share price data is sourced from Sirca. See Appendix for variable definitions. Models include firm clustered and robust standard errors. T-statistics are shown in parentheses. Significance at * 10%, ** 5% and *** 1%.

	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
	CARs	CARs	CARs	CARs	CARs	CARs
	(-1,+1)	(-1,+1)	(-1,0)	(-1,0)	(-2,+2)	(-2,+2)
Intercept	0.0084 (0.34)	0.0057 (0.21)	-0.0131 (-0.69)	-0.0097 (-0.45)	0.0208 (0.67)	0.0213 (0.61)
Female	0.0209 (1.67)*	0.0191 (1.41)	0.0228 (1.74)*	0.0223 (1.66)*	0.0296 (1.93)*	0.0230 (1.45)
Academic		0.0195 (0.52)		-0.0023 (-0.08)		0.0617 (1.49)
Banker		-0.0089 (-0.76)		-0.0124 (-1.48)		-0.0097 (-0.69)
CEO		-0.0160 (-1.10)		-0.0080 (-0.66)		-0.0307 (-1.44)
Consultant		-0.0389 (-1.91)*		-0.0100 (-0.71)		-0.0697 (-2.49)**
Doctor		-0.1481 (-2.26)**		-0.1124 (-1.92)*		-0.1004 (-1.06)
Engineer		-0.0088 (-0.47)		-0.0009 (-0.08)		0.0069 (0.29)
Financial		0.0065 (0.52)		0.0093 (0.80)		-0.0015 (-0.11)
Lawyer		0.0108 (0.56)		-0.0035 (-0.18)		-0.0003 (-0.01)
Politician		-0.0514 (-3.47)**		-0.0426 (-2.95)**		-0.0350 (-2.39)**
Scientist		0.0246 (1.22)		0.0019 (0.10)		-0.0001 (-0.01)
BA		0.0064 (0.59)		0.0092 (1.14)		0.0014 (0.11)
LLB		-0.0072 (-0.42)		0.0063 (0.36)		0.0017 (0.08)
MA		0.0093 (0.75)		0.0052 (0.56)		0.0170 (0.89)
MBA		0.0180 (1.01)		0.0140 (0.90)		0.0159 (0.75)
PHD		0.0019 (0.14)		-0.0035 (-0.29)		-0.0055 (-0.30)
Board seats		0.0169 (2.04)**		0.0149 (1.95)*		0.0182 (1.73)*
Independent		-0.0057 (-0.56)		-0.0139 (-1.53)		-0.0064 (-0.52)
Equity		0.0151 (1.02)		0.0136 (1.20)		0.0337 (1.85)*
New seat		0.0081 (0.92)		0.0028 (0.40)		0.0090 (0.80)
Interlock		-0.0158 (-1.77)*		-0.0124 (-1.53)		-0.0014 (-0.09)
Independent board	-0.0014 (-0.16)	-0.0005 (-0.06)	-0.0049 (-0.70)	-0.0024 (-0.34)	-0.0017 (-0.17)	-0.0064 (-0.52)
CEO involved	0.0032 (0.45)	0.0008 (0.11)	0.0043 (0.90)	0.0026 (0.48)	0.0016 (0.16)	-0.0009 (-0.09)
CEO tenure	-0.0011 (-1.70)*	-0.0012 (-1.88)*	-0.0001 (-0.22)	-0.0002 (-0.46)	-0.0012 (-1.35)	-0.0012 (-1.35)

Chair-CEO duality	-0.0175 (-1.12)	-0.0140 (-0.85)	-0.0143 (-1.49)	-0.0126 (-1.31)	-0.0188 (-1.13)	-0.0164 (-0.92)
Occupation diversity	0.0070 (0.31)	0.0126 (0.54)	-0.0113 (-0.55)	-0.0059 (-0.28)	-0.0174 (-0.67)	-0.0045 (-0.17)
Degree diversity	0.0027 (0.15)	0.0048 (0.25)	0.0139 (0.91)	0.0170 (1.09)	0.0078 (0.34)	0.0038 (0.16)
Gender diversity	-0.0004 (-0.01)	0.0109 (0.34)	0.0123 (0.46)	0.0243 (0.83)	0.0049 (0.15)	0.0205 (0.53)
Ln(Total Assets)	-0.0011 (-0.47)	-0.0012 (-0.45)	0.0009 (0.53)	0.0006 (0.31)	-0.0017 (-0.64)	-0.0026 (-0.84)
Return on Assets	0.0030 (0.16)	-0.0057 (-0.33)	0.0042 (0.27)	-0.0041 (-0.31)	0.0011 (0.05)	-0.0048 (-0.22)
Market-to-Book	0.0013 (0.83)	0.0006 (0.42)	0.0016 (1.15)	0.0014 (0.99)	0.0007 (0.38)	-0.0001 (-0.05)
EOWA recognition	0.0055 (0.43)	0.0039 (0.28)	-0.0070 (-0.83)	-0.0052 (-0.54)	0.0126 (0.63)	0.0120 (0.65)
Financial sector	-0.0117 (-1.49)	-0.0107 (-1.22)	-0.0009 (-0.11)	-0.0004 (-0.05)	-0.0241 (-2.99)***	-0.0241 (-2.49)**
Resource sector	0.0030 (0.32)	0.0012 (0.14)	0.0054 (0.71)	0.0022 (0.30)	-0.0048 (-0.42)	-0.0030 (-0.26)
Announcement < start date	0.0156 (1.18)	0.0125 (0.86)	0.0178 (1.40)	0.0149 (1.12)	0.0250 (1.98)**	0.0215 (1.48)
Announcement > start date	-0.0097 (-1.07)	-0.0119 (-1.29)	-0.0030 (-0.44)	-0.0057 (-0.82)	-0.0022 (-0.19)	-0.0044 (-0.37)
R ²	0.028	0.101	0.033	0.101	0.028	0.085
n (female/total)	25/423	25/423	25/423	25/423	25/423	25/423

Table 9 –Hiring Board, Hiring Firm and Industry

Regressions relate CARs (-1,+1) and (-1,0) to gender of appointee, other director characteristics and control variables. The table displays the coefficients on the Female variable for the two specifications displayed in the previous table. Results for other variables are not reported. The sample comprises 423 interim outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. Hiring firm financial data is from Aspect. Share price data is sourced from Sirca. Non-independent boards are firms with less than a majority of independent directors on the hiring board. Big boards are the quintile of firms with board size greater than 5 directors. Female on board are hiring firms with a female director. CEO involved are firms where the CEO is involved in the appointment of the new director (CEO on nomination committee or no nomination committee). Big firms have total assets greater than \$500 million. High MB is greater than the median of 2.12. High debt is greater than the median of 0.33. Industry sectors are classified as firms in the financial (GICS=financial), resources (GICS=energy, materials) and industrial (other GICS classifications) industry sectors. See Appendix for variable definitions. Models include firm clustered and robust standard errors. T-statistics are shown in parentheses. Significance at * 10%, ** 5% and *** 1%.

	Model	CARs (-1,+1)		CARs (-1,0)		n (female/total)
		Female	R ²	Female	R ²	
Non-independent board	a	0.0438 (1.54)	0.087	0.0399 (1.22)	0.108	10/189
	b	0.0350 (1.69)*	0.218	0.0326 (1.03)	0.228	
Independent board	a	0.0005 (0.05)	0.025	0.0062 (0.72)	0.016	15/234
	b	-0.0069 (-0.43)	0.116	0.0027 (0.19)	0.137	
Big board (>5)	a	-0.0052 (-0.36)	0.135	0.0034 (0.34)	0.105	10/86
	b	-0.0070 (-0.32)	0.312	0.0039 (0.23)	0.378	
Small board (2-5)	a	0.0373 (1.91)*	0.042	0.0322 (1.61)	0.042	15/337
	b	0.0338 (1.61)	0.107	0.0318 (1.51)	0.117	
Female on board	a	0.0525 (1.68)*	0.361	0.0610 (1.28)	0.272	6/82
	b	0.0602 (1.81)*	0.502	0.0688 (1.44)	0.476	
No female on board	a	0.0140 (1.01)	0.026	0.0141 (1.75)*	0.033	19/341
	b	0.0114 (0.82)	0.089	0.0154 (1.66)*	0.108	
CEO involved	a	0.0331 (1.75)*	0.036	0.0293 (1.55)	0.039	17/351
	b	0.0319 (1.59)	0.096	0.0321 (1.53)	0.113	
CEO not involved	a	0.0041 (0.40)	0.409	0.0159 (2.53)**	0.351	8/72
	b	0.0108 (0.90)	0.690	0.0153 (2.29)**	0.718	
Big firms (>\$500 million)	a	0.0573 (2.06)**	0.324	0.0293 (1.62)	0.177	6/83
	b	0.0542 (3.12)***	0.508	0.0339 (2.12)**	0.542	
Small firms	a	0.0098 (0.68)	0.036	0.0229 (1.35)	0.037	19/340
	b	0.0081 (0.53)	0.099	0.0206 (1.21)	0.110	
High MB	a	0.0371 (1.89)*	0.048	0.0365 (1.68)*	0.050	15//212
	b	0.0365 (1.88)*	0.121	0.0378 (1.88)*	0.172	
Low MB	a	0.0153	0.095	0.0147	0.083	10/211

	b	(0.88) 0.0130 (0.59)	0.172	(1.15) 0.0163 (1.03)	0.148	
High Debt	a	0.0195 (1.30)	0.068	0.0105 (1.32)	0.067	15/212
	b	0.0146 (1.00)	0.128	0.0074 (0.69)	0.127	
Low Debt	a	0.0207 (0.89)	0.082	0.0478 (1.80)*	0.084	10/211
	b	0.0136 (0.48)	0.168	0.0392 (1.32)	0.213	
Financial sector	a	0.0108 (0.67)	0.524	0.0092 (0.49)	0.301	5/45
	b	0.0260 (1.35)	0.775	0.079 (0.34)	0.692	
Resources sector	a	0.1183 (3.01)***	0.205	0.0887 (1.98)**	0.146	6/144
	b	0.0981 (2.32)**	0.283	0.0867 (1.70)*	0.264	
Industrial sector	a	-0.0055 (-0.47)	0.040	0.0024 (0.29)	0.042	14/234
	b	-0.0025 (-0.21)	0.121	0.0055 (0.72)	0.127	

Table 10 – Equal Opportunity in the Workplace Agency (EOWA)

This table shows mean and median cumulative abnormal returns (CARs) based on the market model over three different announcement periods (-1,+1), (-1,0) and (-2,+2) for all appointments and by gender of the appointee. The all appointment sample comprises 1126 outside director appointments to Australian Stock Exchange listed companies between 1 January 2004 and 30 June 2006 with data available to calculate CARs. The clean interim sample consists of 423 interim appointments with no confounding news between (-1,1) of the announcement date. In Panels A and B, the all appointment sample is divided into subsamples with and without EOWA recognition. EOWA recognition includes receiving an EOWA employer of choice for women award or being identified as top10 in their industry for EOWA compliance. In Panels C and D, the clean interim appointment sample is divided into subsamples with and without EOWA recognition. In Panels E and F, the clean interim appointment sample from ASX200 firms are divided into subsamples with and without 2 female executives. Director and hiring board data is sourced from company annual reports on the Connect4 Annual Report database. EOWA data is sourced from the EOWA website and EOWA census publications. Share price data is sourced from Sirca. In parentheses, t-tests and Wilcoxon signed rank tests are used to report the significance of the mean and median CARs from zero for all, female and male appointments and t-tests and Mann-Whitney tests are used to report the significance of differences in mean and median CARs between female and male appointees. Significance is reported at * 10%, ** 5% and *** 1%.

	Mean CARs			Median CARs		
	-1,+1	-1,0	-2,+2	-1,+1	-1,0	-2,+2
<i>Panel A – EOWA recognition (All appointment sample)</i>						
All (21)	0.0112 (0.79)	0.0081 (0.87)	0.0115 (0.68)	-0.0111 (-0.73)	-0.0022 (-0.21)	-0.0093 (-0.63)
Female (5)	0.0758 (1.79)	0.0520 (2.19)*	0.0723 (1.52)	0.0503 (1.35)	0.0651 (1.62)	0.0241 (1.08)
Male (16)	-0.0090 (-0.95)	-0.0056 (-0.79)	-0.0075 (-0.51)	-0.0124 (-2.04)**	-0.0081 (-1.63)	-0.0155 (-1.47)
Difference	0.0848 (3.00)***	0.0576 (3.20)***	0.0798 (2.17)**	0.0627 (2.35)**	0.0732 (2.27)**	0.0396 (1.86)*
<i>Panel B – No EOWA recognition (All appointment sample)</i>						
All (1105)	0.0068 (2.62)***	0.0045 (1.93)**	0.0035 (1.07)	0.0007 (1.66)*	-0.0007 (-0.26)	-0.0026 (-0.62)
Female (62)	0.0153 (2.66)***	0.0158 (2.54)**	0.0152 (2.03)**	0.0088 (2.52)**	0.0034 (2.32)**	0.0078 (1.40)
Male (1043)	0.0063 (2.31)**	0.0038 (1.55)	0.0028 (0.81)	-0.0001 (-1.16)	-0.0010 (-0.25)	-0.0030 (-0.94)
Difference	0.0090 (0.81)	0.0120 (1.20)	0.0124 (0.88)	0.0089 (1.92)*	0.0044 (2.18)**	0.0108 (1.55)
<i>Panel C – EOWA recognition (Clean interim sample)</i>						
All (11)	0.0113 (0.50)	0.0019 (0.17)	0.0106 (0.42)	-0.0009 (-0.49)	-0.0067 (-0.49)	-0.0045 (-0.40)
Female (3)	0.0926 (1.42)	0.0490 (2.59)	0.0842 (1.09)	0.0503 (1.34)	0.0651 (1.34)	0.0241 (0.80)
Male (8)	-0.0192 (-2.54)**	-0.0158 (-2.55)**	-0.0170 (-1.16)	-0.0151 (-2.03)**	-0.0104 (-2.45)**	-0.0098 (-1.33)
Difference	0.1118 (2.93)***	0.0648 (4.38)***	0.1012 (2.05)*	0.0654 (2.35)**	0.0755 (2.35)**	0.0339 (1.33)
<i>Panel D – No EOWA recognition (Clean interim sample)</i>						
All (412)	0.0062 (1.59)	0.0003 (0.08)	0.0038 (0.78)	0.0028 (1.40)	-0.0011 (-0.89)	0.0007 (0.18)
Female (22)	0.0170 (1.58)	0.0186 (1.29)	0.0246 (1.68)	0.0088 (1.92)*	0.0036 (1.10)	0.0202 (1.46)
Male (390)	0.0056 (1.37)	-0.0008 (-0.24)	0.0026 (0.52)	0.0025 (1.06)	-0.0013 (1.13)	-0.0001 (-0.17)
Difference	0.0114 (0.66)	0.0194 (1.37)	0.0220 (1.03)	0.0063 (1.30)	0.0049 (1.23)	0.0203 (1.50)

Panel E – ASX200 with 2 female executives (Clean interim sample)

All (17)	0.0091 (1.42)	0.0099 (1.58)	0.0094 (1.38)	0.0075 (1.18)	0.0086 (1.33)	0.0157 (1.23)
Female (2)	0.0378 (3.00)	0.0462 (2.43)	0.0477 (2.02)	0.0378 (0.89)	0.0462 (0.89)	0.0477 (0.89)
Male (15)	0.0052 (0.81)	0.0050 (0.88)	0.0043 (0.69)	0.0061 (0.54)	0.0049 (0.65)	-0.0031 (0.71)
Difference	0.0326 (1.75)*	0.0412 (2.43)**	0.0434 (2.31)**	0.0317 (1.71)*	0.0413 (1.86)*	0.0508 (1.57)

Panel F – ASX200 without 2 female executives (Clean interim sample)

All (66)	0.0035 (0.60)	0.0001 (0.03)	0.0034 (0.51)	-0.0008 (-0.02)	0.0010 (0.35)	0.0020 (0.11)
Female (6)	0.0383 (1.03)	0.0125 (1.02)	0.0298 (0.68)	0.0063 (0.63)	0.0023 (0.84)	-0.0037 (0.00)
Male (60)	0.0001 (0.01)	-0.0011 (-0.24)	0.0007 (0.12)	-0.0011 (0.28)	0.0010 (0.14)	0.0028 (0.12)
Difference	0.0382 (1.88)*	0.0136 (0.90)	0.0291 (1.28)	0.0074 (0.88)	0.0013 (0.57)	-0.0065 (-0.06)