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Do Non-Staggered Board Elections Matter to Earnings Quality and the Value Relevance of Earnings and Book Value?

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Do non-staggered board elections matter to earnings quality and the value relevance of earnings and book value?

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Abstract

Purpose – The purpose of this paper is to examine the impact of non-staggered voting for members of the board of directors on earnings quality and the value relevance of earnings and book value.

Design/methodology/approach – The authors used a sample of Taiwanese firms whose board was elected as a whole every three years from 2003 to 2013. The authors used multiple regression analysis to test whether board of directors elections and corporate governance affected earnings quality and the value relevance of earnings and book value.

Findings – The authors found that elections led to lower earnings quality, but better corporate governance led to greater earnings quality. In the presence of board elections, earnings have reduced value relevance but book value had increased value relevance. Finally, given board elections, the relative value relevance of earnings and book value on stock price was not fully moderated by strong corporate governance.

Research limitations/implications – The results presented here indicate the importance of better corporate governance in diffusing suspicions of management occasioned by the use of discretionary accruals in years in which board elections take place. Better corporate governance regimes led to a more positive relationship of discretionary accruals to earnings persistence, even in the presence of directorial elections. Similarly, better corporate governance regimes led to a more positive relationship between earnings per share and stock prices. Limitations include the restriction of the testing locale to Taiwan. That said, many companies around the globe use non-staggered board elections. Accordingly, these results suggest issues of importance to corporate governance advocates beyond Taiwan as well.

Originality/value – This study deepens the field's understanding of the impact of corporate governance arrangements and schedules for electing board of directors' members on issues of interest to stockholders.

Keywords Value relevance, Earnings quality, Board elections, Non-staggered board

Paper type Research paper

1. Introduction

The importance of having effective governance mechanisms to oversee the activities of upper management is well established in the accounting and finance literature (Jensen and Meckling, 1976). Management, left to its own devices, or subject to inadequate monitoring mechanisms, has long been considered prone to pursue its own ends, even at the expense of

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company stockholders (Chin *et al.*, 2006). The importance of effective monitoring mechanisms is highlighted in this literature. One such monitoring mechanism is the board of directors of the organization. Board of directors are typically charged with representing the shareholder interest with respect to the safeguarding of corporate – ultimately shareholder – assets and with assessing the performance of management. Typically, board members are elected by shareholders. These electoral arrangements may vary based on country company law and – consistent with country company law – on corporate choices consistent with that law.

A perceived failure of the board to effectively represent the shareholders may impact the probability that particular members of the board of directors may be reelected to his/her post (Zhao and Chen, 2008; DeAngelo, 1988). Lack of independence of members of the board, or members of the audit committee of the board, may impair the effectiveness of the board in averting earnings management efforts and, therefore, may fail to protect shareholders (Ebrahim, 2007). If so, then the monitoring mechanisms over management itself may be perceived to have failed and the credibility of corporate financial statements may be damaged. The success of corporate governance in managing management is, in part, reflected in the financial statements themselves. As International Accounting Standards (IAS) 1.9 states, "Financial statements […] show the results of the management's stewardship of the resources entrusted to it". Thus, poorer results, other things equal, suggest poorer management stewardship.

Whether board of directors elections should be staggered, from the standpoint of firm shareholders, is a matter of great controversy. On the one hand, it has been argued that non-staggered board of directors elections may lead to an inconstancy of corporate governance, in that boards facing elections may engage in behaviors that do not foster the firm's long-term prospects (Zhao and Chen, 2008). Cremers *et al.* (2014) note that staggered elections may reduce the directors' accountability and result in shirking, empire building and extracting private benefits due to the directors' status as corporate insiders. In addition, Cremers *et al.* (2014) note that a board insulated from shareholder pressure because of the staggered elections may choose to block takeover attempts, as only one-third of the board would be up for election in a given year, and therefore it would take two years for a party wishing to take over the target firm to achieve control over the board of directors. Accordingly, potential outsiders may shy away from making offers to buy out a firm wherein staggered board elections are used[1].

What is the evidence on the behavior of staggered boards? Faleye (2007) finds that staggered (a.k.a. classified) boards lend themselves to behaviors that diminish shareholder value. The staggered boards, Faleye finds, shelter management from the discipline of the market. Faleye notes that in firms with staggered boards, the effectiveness of outside directors is reduced when it comes to chief executive officer (CEO) replacement decisions. Further, these staggered boards were associated with a reduced relationship between executive compensation and firm performance, were less likely to be involved in proxy contests and were also less likely to put into effect proposals approved by the shareholders. Faleye draws the conclusion that managerial entrenchment and reduced board accountability resulted in this loss in firm value. Zhao and Chen (2008) examined the association between staggered boards and fraud, on the one hand, and the relationship between staggered boards and firm value, on the other. The authors found that firms with staggered boards were associated with a reduced incidence of fraud but also associated with reduced firm value. Zhao and Chen (2008) state that the presence of staggered boards may allow managers to enjoy what the authors call "the quiet life" and reduce management's motivation to manage earnings, thereby resulting in a reduced stock market valuation. Given

the difficulty that takeover firms might have with taking over a company with a staggered board election system, a higher offer outright for the target may be seen as necessary to win over the existing board[2].

Companies with *non-staggered boards*, however, may be less likely to engage in long-term value creation activities. Also, they may not be as likely to engage in informed decision-making as staggered boards. Thus, the lack of board insulation may lead the board to engage in more short-term oriented business decision-making, resulting in overinvestment in shorter-term projects or engaging in other activities that result in higher stock prices (Cremers *et al.*, 2014). An instance of that decision-making may be to engage in, or permit, accounting practices that lead to lower earnings quality in board election years. Having higher reported earnings in board election years may, therefore, result in a greater likelihood of board re-election. Given that earnings manipulations are hard to carry forward, year after year, these earnings manipulations are less likely for firms that use a staggered board election system than for firms that elect the entire board in the same year.

Zhao and Chen (2008) already showed that firms with staggered boards were less likely to commit fraud and had relatively lower absolute abnormal accruals. Their findings imply that non-staggered boards are more likely to take an "expropriation view", that is, to engage in earnings management and bear with the resulting poorer earnings quality. With non-staggered boards, the probability of board ouster and replacement is much greater and more immediate than with staggered boards.

Prior research has examined whether better corporate governance reduces the proclivity of managers to manipulate earnings. The general conclusions are that better corporate governance does dampen the propensity of managers to manipulate earnings (Duh *et al.*, 2009; Peasnell *et al.*, 2005; Klein, 2002; Beasley, 1996; Agrawal and Knoeber, 1996). Prior literature, however, does not examine whether the impact of board elections and, separately, other aspects of strong corporate governance will affect the relationship between future earnings and discretionary accruals. This study, therefore, examines whether board elections result in short-term behaviors under the control of the board and earnings manipulation behaviors that may foster the reelection of the board of directors[3].

A question may arise as to why management would cooperate with board-initiated earnings management attempts. Management may be concerned that an incoming board may view the current management as part of the problems of the firm, suggesting that current management will be less secure with the incoming board than they would have been had the old board been retained. DeAngelo (1988) is supportive of this view. DeAngelo (1988) notes that stockholder proxy contests have as a trigger the issuance of poor earnings information by corporate management. "During an election campaign", DeAngelo (1988, p. 3) notes, "incumbent managers apparently exercise their accounting discretion to paint a favorable picture of their own performance to voting stockholders". DeAngelo (1988, p. 3) argues that such efforts are undertaken because victorious dissident shareholders, once in control, use that control to "take an earnings bath" and blame it on the consequences of poor decisions by the previous management.

We take it as a given in this study, therefore, that both management and board members have incentives to manipulate earnings. While the structures and incentives that may lead to earnings manipulation may differ between staggered and non-staggered boards of directors, we focus here on non-staggered boards of directors. We examine whether non-staggered boards oversee management that chooses to live the "quiet life" or engage in "expropriation" (Zhao and Chen, 2008). Our study, therefore, complements Zhao and Chen's (2008) work by testing whether the finding that managers in non-staggered board settings take an

"expropriation view" rather than seek the "quiet life" is also valid in Taiwan, rather just in the US setting used in Zhao and Chen's (2008) study.

International practice with regard to the use of staggered, or non-staggered, board elections varies. Bebchuk *et al.* (2013) cited statistics (summarized from FactSet Research Systems) that there were 303 S&P 500 companies with staggered boards at the beginning of 1999, and that that number declined to 126 at the beginning of 2012. That is, during this 12-year period, the proportion of S&P 500 companies with classified boards declined by about 60 per cent. Bebchuk *et al.* (2002) note that staggered board election use is not as popular in the UK as in the USA. The UK's Financial Regulatory Council (FRC), in 2010, released an updated corporate governance code recommending against the continued use of staggered board elections in the UK. The UK's FRC recommended against the continued use of staggered board elections as part of an attempt to reduce the level of corporate governance problems revealed by the global financial crisis of 2008 and following years. Although the revised UK Corporate Governance code recommended that FTSE 350 boards should be put up for election every year, this was not required[4]. Other methods of measuring board effectiveness exist, including Switzer and Cao's (2011) approach. The latter uses the Canadian Board Shareholder Confidence Index to measure each individual board member's potential, the potential of the board acting as a group and the quality of past board practices. These are used by Switzer and Cao (2011) as a predictor of economic value added. Economic value added is defined as the firm's ability to generate economic profits that foster shareholder wealth. Such efforts, however, do not address the electability of the board. Also, any attempts by the board to game the firm's accounting practices do not address better secure reelection. Given the continuing controversy over the proper election scheme for boards of directors, it is important to examine the impact of elections on corporate financial reporting behaviors.

In this study, we used Taiwanese firms to examine the relationship between board elections and other elements of corporate governance (e.g. CEO duality) and between earnings persistence, on the one hand, and the value relevance of earnings and book value, on the other. Article 195 of Taiwan's Company Law stipulates that the term of a board director in the publicly listed firms must not exceed three years, although a board member whose three-year term is expiring is eligible to stand for reelection[5]. In Taiwan, the three-year terms for board members are uniform. In addition, all members of the board are elected at the same time. Unlike in the USA, for example, there is no practice of staggering board member elections, a practice in which – for almost 25 per cent of S&P 500 firms – one-third of the board is elected each year, with the other two-thirds of the membership not standing for election in any particular year. Accordingly, using Taiwanese data permits a study like this to be undertaken. Further, unlike other venues, in which staggered board elections may be held, the Taiwanese practice of placing the entire board of directors up for election at the same time heightens the importance of convincing voting shareholders of the worthiness of the members standing for election. One way to do so, of course, is to present a picture of the firm as performing well financially. This may be done through providing excellent board oversight of managerial decisions with the result that the firm does, indeed, perform very well or by fostering the use of accounting practices that present the firm as performing better than it actually does. The latter can be accomplished by using discretionary accruals to boost reported net income. Using a sample of 7,456 Taiwanese firm-years whose data were available from 2003 to 2013, we examine the impact of board elections and broader corporate governance measures on earnings persistence and the relative importance for value relevance of reported earnings per share (EPS) and of book value of assets on the stock price of sample firms.

We find that poorer corporate governance is associated with greater use of discretionary accruals, as calculated using the modified Jones model (Dechow *et al.*, 1995; Walker, 2013), and that both poorer corporate governance and greater use of discretionary accruals are associated with reduced earnings persistence. This finding is consistent with the hypothesized link between the need of firms to improve financial appearances in the face of an election that might be of consequence to both the running members of the board of directors, on the one hand, and consequently to management of the firm, on the other. The presence of board elections changes the relative value relevance of earnings and book value. Investors seemed to give greater value relevance to book value in stock valuation than to earnings. Better governance leads to greater value relevance of earnings increases but decreased the value relevance of equity book value. This finding is consistent with corporate governance mechanisms perceived to be better at providing more credibility to reported financial statement information (DeAngelo, 1988). But, in the presence of board elections, the relative value relevance of earnings and book value on stock price was not moderated by strong corporate governance.

There are three contributions of this study. First, the study supports the notion that boards of directors, like senior firm management, have incentives (e.g. equity incentives) to allow the use of income-manipulating tactics such as making discretionary accruals to foster their own well-being (Ronen *et al.*, 2006). In effect, we find that managers serving in firms using non-staggered board election arrangements seem to take an "expropriation view", as addressed by Zhao and Chen (2008). Boards, of course, receive both emoluments, prestige and enhanced contact networks from their service, and therefore have incentives to perform – or be perceived to perform – their oversight role well. Ronen and Yaari (2008, p. 240), for example, note that "reputation is valuable not only to firms on whose boards the director sits but to the director personally as well", with "directors associated with poorly performing firms hold(ing) substantially fewer directorships thereafter" (p. 241). Second, the results of this study also support the importance of the board of directors being perceived as performing an effective monitoring role, because the failure to perform that role undermines the credibility of the financial statements, as represented here by the earnings and book value numbers[6]. Third, the results of this study argue that the value relevance of earnings as opposed to book value may differ between firms that use non-staggered elections of boards of directors as opposed to staggered elections of boards of directors. These results, therefore, argue that researchers should consider their subject firms' boards of directors' election arrangements in interpreting the results of the value relevance of earnings and book values to stock prices.

In Section 2, this paper presents a literature review and hypotheses. In Section 3, the methodology and data sources are presented. In Section 4, the results are described, and in Section 5, the conclusions drawn from the study are presented, along with suggestions for further research.

2. Literature review and hypotheses

Earnings are a key signal of corporate success that managers provide to investors. Firms can manage earnings to convince investors that the corporation is doing better than it actually is. Degeorge *et al.* (1999) believed that earnings management arises from the game of information disclosure that executives and external investors have to play: investors make decisions on the basis of financial statements provided by managers. This provides an incentive to managers to manipulate earnings to influence outsiders to invest, even if managers have to give away earnings. Besides, the compensations of managers (including salary and bonus) are closely associated with earnings performance. This is another

incentive for managers to distort accounting records and manipulate earnings (Collins and DeAngelo, 1990). In general, there are two different perspectives for discretionary accruals. First, managers use discretion to disclose private information to investors, which is known as signaling discretion. The second view is that managers will use discretion to manipulate financial reporting systems to enhance personal welfare at the expense of shareholders. This is called opportunistic discretion (Watts and Zimmerman, 1986).

When a company is sending signals, discretionary accruals help to increase earnings persistence and value relevance, improving earnings quality. On the other hand, when the company tries to conceal information, discretionary accruals will reduce earnings persistence and value relevance, thus hurting earnings quality. During board elections, incumbent boards of directors or managers may have the intention of signaling the company's value as they may face a battle to retain their board seats. They tend to signal the company's value through the use of discretionary accruals. Such manipulation is indicative of earnings management, where earnings quality is demonstrated through the use of discretionary accruals. Earnings quality is enhanced in situations where such accruals tend to make the reported earnings better reflect the long-term underlying capacity of the firm to generate earnings. Also, discretionary accruals can be utilized by managers to conceal poor operational results or even illegal conduct. In this case, the use of discretionary accruals reflects opportunistic earnings management. The result is manipulations that will lower earnings quality.

Zhao and Chen's (2008) found differences between staggered board and non-staggered board behavior with respect to fraud and earnings management in the USA. Zhao and Chen (2008, p. 1376) state that:

> In all three specifications, the coefficient on *Stagboard* is negative and statistically significant […] suggesting that staggered boards mitigate earnings management and improve earning quality. […] Staggered boards not only lessen incentives to perform, but also mitigate incentives to engage in earnings management.

Zhao and Chen's (2008) results imply that the use of non-staggered boards, compared to the use of staggered boards, is positively and significantly related to abnormal accruals. The Zhao and Chen (2008) result applies to firms in the USA. This research will examine whether voting for non-staggered boards in election years is associated with earnings management in the setting of Taiwan. Zhao and Chen (2008) note that the use of staggered boards suggests that taking control of the board may take at least two years, as only one-third of the board may be subject to displacement and replacement every year. Our study notes that board elections in Taiwan are held only every three years; thus, it is impossible for the board to turn over every year and even every second year. Zhao and Chen's (2008) results lend support to our hypothesis development that election years will result in a greater election year presence of earnings management efforts.

DeAngelo (1988) demonstrated how proxy contests for board of director seats may be impacted by the firm's failure to maintain acceptable earnings levels, as opposed to stock prices. DeAngelo found that pre-proxy contest accounting returns were beneath the returns for the market itself. This was not true for the pre-contest stock returns. DeAngelo (1988) notes that during the election contest, managers tended to use their powers over the accounting system to present a more positive portrait of the firm, in the process providing stockholders with a more favorable impression of the incumbent management's performance. DeAngelo (1988, p. 4) writes that "these findings indicate that corporate earnings performance plays a role in the process through which alternative managers compete for stockholder support". Our first hypothesis is presented below.

H1. In the presence of board elections, managers are more likely to exercise their discretion in ways that reduce earnings quality.

Given that an owner may effectively control a firm, he or she also controls the production of the firm's accounting information and the choice of its reporting policies (Chin *et al.*, 2006). Accounting has a different role in a concentrated ownership context as opposed to a diffused ownership context. The accounting literature contains extensive research and theorizing on how the agency problem between owners and managers affects the role of accounting in management compensation contracts and how the reporting incentives of managers affect a firm's accounting information quality (Jensen and Meckling, 1976; Shleifer and Vishny, 1997; Chin *et al.*, 2006). Will improving the monitoring system, as exemplified by using a better corporate governance regime (Ebrahim, 2007; Switzer and Cao, 2011), decrease the likelihood of managerial use of discretionary accruals to affect reported earnings during board elections? Better corporate governance should result in a company using discretionary accruals more prudently, inhibiting the use of accruals to cover poor operational results. A reduction in inappropriate or problematic discretionary accruals should have a positive influence on earnings quality. To answer the question above, good corporate governance can change the degree to which a company uses inappropriate discretionary accruals and thus positively influence earnings quality. Therefore, we develop the following hypothesis:

H2. In the presence of board elections, manager's actions that may reduce earnings quality will be moderated by strong corporate governance.

A key indicator of the value of a firm investment to stakeholders is the price of the firm's shares. Much else about a firm is opaque. Accounting numbers are produced by accounting systems whose operations are cloaked in the mystery of accounting rules, compounded by accounting practices that may stretch or even violate the rules. Thus, the usefulness of reported earnings in affecting the level of a firm's stock price may be problematic. Nevertheless, the operations of firms have been found to impact the value relevance of accounting information. Bae and Jeong (2007) investigated the relationship between corporate governance systems in South Korea and the value relevance of earnings and book value to stock prices. The authors found that in cases of cross-ownership, there was a reduced value relevance of earnings and book value to stock prices. In the presence of foreign ownership, however, there was greater value relevance of these items. Bae and Jeong regarded cross-ownership as a proxy for the conflict between controlling and minority shareholders. Bae and Jeong's (2007) findings suggest that less immediately interested ownership interests, such as foreign ownership, may act as a brake on the propensity of management and the board to manipulate the financial statement accounts.

Marquardt and Wiedman (2004) studied the impact of earnings management under circumstances wherein management had the incentive to engage in opportunistic earnings management. The authors noted that prior literature has established that financial statement information becomes less value relevant in circumstances where the managers have incentives to manipulate earnings, because management is participating in secondary market sales of personal shareholdings. Specifically, the authors note that in these circumstances, the value relevance of earnings declines relative to the value relevance of book value. Marquardt and Wiedman (2004) note that prior literature (Burgstahler and Dichev, 1997) holds that there is a complementary relationship between earnings and book value in the determination of the price of the stock. When the earnings calculations cannot be trusted because of earnings manipulations via discretionary accruals, the investor is forced to rely more heavily on firm book value.

The findings of Marquardt and Wiedman (2004) and Bae and Jeong (2007) argue for the importance of understanding the relationship of a firm's control structure to the value relevance of earnings and book value. Although the previously cited studies looked at internal control system weaknesses, controlling versus minority shareholders, foreign stockholdings and management having incentives to behave in self-serving ways, the studies did not look at the relationship between the boards of directors elections and more generalized measures of corporate governance, on the one hand, and the value relevance of earnings and book value to share prices, on the other. We address these latter issues here.

Fischer *et al.* (2009) studied the relationship between uncontested election votes for boards of directors members and investor reactions to subsequent events. In their study, they tabulated the percentages of votes actually cast for members of boards of directors in uncontested directorship elections. They then compared these vote percentages with stock price reaction to such subsequent events as managerial turnover. The authors found that when high percentages of eligible votes were cast for director-candidates, there was a smaller stock price reaction to managerial turnover than when lower percentages of eligible votes were cast for director-candidates. Further, Fischer *et al.* (2009) found that relatively lower percentages of votes cast for board candidates were associated with greater board turnover, CEO resignation, reduced CEO compensation, etc. Collectively, Fischer *et al.*'s results suggest that board of directors votes meaningfully impact the future behavior of the board, the CEOs, and acquisition and divestiture behavior. Given the likelihood of such outcomes, then, boards of directors and the managements which, in theory, serve at investors' discretion have important reasons to foster investor confidence in the incumbent boards by, for example, manipulating earnings performance, as portrayed in DeAngelo's (1988) study. In addition, Asthana and Balsam (2010) found that firm performance and risk had an impact on director turnover. Managing perceptions of such performance, and associated risk, is important in managing investor perceptions of, and reactions to, poor performance and related risk. Performance issues may be at least temporarily masked through earnings manipulations. Therefore, earnings quality is likely to be lower because of higher discretion exercised by firms when managers expect the boards to be elected. The likely reduction in earnings quality is likely to worsen the relationship between earnings and stock prices. The relationship between book value and stock prices, however, is less likely to be affected, as book value, on a percentage basis of a firm's net worth, is less likely to be pronouncedly affected by discretionary accruals than earnings are. Accordingly, our two alternative hypotheses are presented below:

H3a. In the presence of board elections, the value relevance of earnings decreases.

H3b. In the presence of board elections, the value relevance of book value increases.

Researchers sought to examine whether higher levels of corporate governance positively influenced stockholders' perceptions of a firm and hence firm value. The general conclusion is that a higher level of corporate governance does have a positive influence on firm value (Lins, 2003; Yeh *et al.*, 2001; Core *et al.*, 1999). The work of Marquardt and Wiedman (2004) and Bae and Jeong (2007), described above, is supportive of this as well. Hence, our hypothesis is presented below.

H4. In the presence of board elections, the value relevance of earnings and book value on stock price will be moderated by strong corporate governance.

3. Methodology and sample selection

We follow prior research (Sloan, 1996; Xie, 2001) in exploring the relationship between board elections and corporate governance and between earnings persistence and discretionary

accruals. Further, we extend the valuation framework developed by Ohlson (1995) to explore the impact of board elections and corporate governance on the relative value relevance of earnings and book value. We used multiple regression analysis to evaluate the hypotheses. These regression models are described next.

3.1 Regression models of board election and corporate governance on earnings quality

In this study, earnings quality is measured by earnings persistence as suggested by Sloan (1996) and Xie (2001). As presented in the Appendix, discretionary accruals estimated by the modified Jones model are used as proxy variables for the degree of earnings management. The following regression models are used to examine the impact of operating cash flows (OCF), nondiscretionary accruals (NDA), discretionary accruals (DA), corporate governance (CG) and board election (BD) measured at time t on earnings deflated by beginning total assets (EARN) at time $t+1$. There is a possibility that year effects and/or industry effects may have an impact on the results. Accordingly, we control for year and industry affects here as well.

$$\mathrm{EARN}_{it+1} = \alpha_0 + \alpha_1 \mathrm{OCF}_{it} + \alpha_2 \mathrm{NDA}_{it} + \alpha_3 \mathrm{DA}_{it} + \mathrm{Year} + \mathrm{Industry} + \varepsilon_{it} \quad (1)$$

$$\mathrm{EARN}_{it+1} = \alpha_0 + \alpha_1 \mathrm{OCF}_{it} + \alpha_2 \mathrm{NDA}_{it} + \alpha_3 \mathrm{DA}_{it} + \alpha_4 \mathrm{BD}_{it} + \alpha_5 (\mathrm{DA}_{it} \times \mathrm{BD}_{it}) + \mathrm{Year} + \mathrm{Industry} + \varepsilon_{it} \quad (2)$$

$$\mathrm{EARN}_{it+1} = \alpha_0 + \alpha_1 \mathrm{OCF}_{it} + \alpha_2 \mathrm{NDA}_{it} + \alpha_3 \mathrm{DA}_{it} + \alpha_4 \mathrm{BD}_{it} + \alpha_5 (\mathrm{DA}_{it} \times \mathrm{BD}_{it}) + \alpha_6 \mathrm{CG}_{it} + \alpha_7 (\mathrm{DA}_{it} \times \mathrm{CG}_{it}) + \alpha_8 (\mathrm{DA}_{it} \times \mathrm{CG}_{it} \times \mathrm{BD}_{it}) + \mathrm{Year} + \mathrm{Industry} + \varepsilon_{it} \quad (3)$$

In equation (2), the coefficient of the interaction term DA × BD, α_5, is used to test the impact of board elections on the contribution of discretionary accruals to earning persistence. If the interaction term coefficient of DA × BD, α_5, is significant, then *H1* will be deemed to be supported. In equation (3), the coefficient of DA × CG × BD, α_8, is used to examine whether strong corporate governance will alleviate the relationship between earnings persistence and the combined effect of board elections and discretionary accruals. If the interaction term coefficient α_8 is significant, then *H2* will be deemed to be supported. Table I summarizes the definitions of all variables used in this study.

In this study, we used a number of variables to capture corporate governance based on prior literature. These include:

- board size (Beasley, 1996);
- number of independent directors and supervisors (Peasnell *et al.*, 2005; Klein, 2002; Cho and Rui, 2009; Core *et al.*, 1999);
- CEO as the board chair (Chen and Jaggi, 2000);
- number of independent supervisors (Cho and Rui, 2009);
- number of institutional investors (Koh, 2003; Bushee, 1998);
- number of foreign institutional investors (Haat *et al.*, 2008); and
- the difference between control rights and cash flow rights (Claessens *et al.*, 2000; Chin *et al.*, 2009).

These variables are measured as described below.

Symbol	Variable	Measure
EARN	Earnings	Earnings from continuing operations, divided by total assets at the beginning of the year
OCF	Operating cash flows	Cash flow from operations, deflated by total assets at the beginning of the year
NDA	Non-discretionary accruals	Non-discretionary accruals were estimated by using modified Jones model as stated in the methodology section
DA	Discretionary accruals	Discretionary accruals were calculated by using modified Jones model as stated in the methodology section
BD	Board election	A dummy variable for the board reelection. The firm with board reelection is denoted as 1, otherwise 0
CG	A composite variable of various corporate governance measure	The composite measure includes board size, independent directors, independent supervisors, CEO and board chair duality, institutional investors' shareholding, foreign institutional investors' shareholding and the difference between control rights and cash flow rights
P	Stock price	Stock price per share at the due day of releasing annual financial report, mandated by Article 36 of Taiwan's Security and Exchange Act
EPS	Earnings per share	Annual reported earnings per share
BV	Book value	Book value per share at the end of the fiscal year
ROE	Return on equity	Ratio of income before interests and taxes to common stockholder's equity
LEV	Leverage	The ratio of total debts to total assets
SIZE	Size	Natural logarithm of total assets
LOSS	Profitability indicator	A dummy variable for the firms with negative earnings. The firm with negative net income is denoted as 1, otherwise 0
YEAR	Year dummies	Years 2004-2013 are included in the regression models
INDUSTRY	Industry dummies	There are 18 industries included in the dummies, including cement; foods; plastics; textiles; electric and machinery; electric; appliance and cable; chemicals; glass and ceramics, steel and iron; rubber; electronics; construction; transportation; tourism; and wholesale and retail

Table I.
Variable definition

Board size (B_SIZE) is measured as the total number of directors on the board. Independent directors and supervisors (IND) is an indicator variable equaling 1 if none of the directors and supervisors is an insider of the company and holds more than 1 per cent of the firm's stock and 0 otherwise. Duality of CEO (Dual) is an indicator variable equaling 1 if CEO is not the board chair, 0 otherwise. Institutional investors' shareholding (%INST) is the percentage of shares held by institutional investors. Foreign institutional investors' shareholding (%FORE) is the percentage of shares held by foreign institutional investors. The difference between voting rights and cash flow rights (VC) is computed as the percentage of voting rights minus the percentage of cash flow rights. Higher values for B_SIZE, IND, %INST and %FORE and lower values for VC represent more effective corporate governance mechanisms. This is consistent with the belief that insiders will have greater difficulty controlling boards that are larger, more independent, have greater external (i.e. domestic

institutional and foreign institutional) ownership and more widely distributed voting rights, as measured by a decreasing distance between voting and cash flow rights.

We followed the examples of Bushman *et al.* (2004) and Duh *et al.* (2009) in using an overall index technique to measure corporate governance. We combined the measures because an overall index of corporate governance avoids unidimensional bias that may exist with simpler measures. With the combined index, the interpretation of the elements as to whether "it" is good corporate governance is clearer based on the literature cited. We chose not to use the underlying constituent individual indicators, as individual indicators would be cumbersome.

The index was developed in the following manner. We first sort B_SIZE, %INST and %FORE in ascending order and VC in descending order before computing percentile values such that each variable can be transformed into a scale between 0 and 1. We then compute a composite variable by adding up the percentile values of B_SIZE, %INST, %FORE and VC plus IND and Dual to capture the strength of CG. Hence, a high value of CG is deemed representative of more effective corporate governance mechanisms.

3.2 Regression models of board election and corporate governance on the value relevance of earnings and book value

Corporate governance, which is perceived to be of better quality, may also impact investor perceptions of the quality of a firm's reported earnings and its asset book values. There may, that is, be less suspicion of the firm's earnings and book value reporting in these circumstances. Therefore, it is critical to examine whether board elections will have an impact on the value relevance of earnings, as proxied for by EPS and book value or BV. We carry out these analyses by using equations (4)-(6). Equations (4)-(6) are presented as follows:

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BV_{it} + \beta_3 ROE_{it} + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \beta_6 LOSS_{it} + Year + Industry + \varepsilon_{it} \quad (4)$$

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BV_{it} + \beta_3 ROE_{it} + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \beta_6 LOSS_{it} + \beta_7 (EPS_{it} \times BD_{it}) + \beta_8 (BV_{it} \times BD_{it}) + Year + Industry + \varepsilon_{it} \quad (5)$$

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BV_{it} + \beta_3 ROE_{it} + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \beta_6 LOSS_{it} + \beta_7 (EPS_{it} \times BD_{it}) + \beta_8 (BV_{it} \times BD_{it}) + \beta_9 (EPS_{it} \times CG_{it}) + \beta_{10} (BV_{it} \times CG_{it}) + \beta_{11} (EPS_{it} \times BD_{it} \times CG_{it}) + \beta_{12} (BV_{it} \times BD_{it} \times CG_{it}) + Year + Industry + \varepsilon_{it} \quad (6)$$

The β_7 and β_8 in equation (5) are used to test whether board elections will affect the value relevance of EPS and BV. If the interaction term coefficient for EPS × BD, β_7, decreases the value relevance of EPS by having a negative coefficient, whereas EPS itself has a positive coefficient (β_1), then *H3a* will be deemed to be supported. Further, if the interaction term coefficient for BV × BD, β_8, has a positive coefficient, and thereby positively contributes to the value relevance of BV, which also has a positive coefficient (β_2), then *H3b* will be deemed to be supported. In equation (6), the three-way interaction terms of EPS × BD × CG (β_{11}) and BV × BD × CG (β_{12}) are used to examine whether strong corporate governance can enhance the value relevance of both EPS and BV in presence of board elections. If the coefficients, β_{11} and β_{12}, for the two named interaction terms are positive, then *H4* will be deemed to have been supported.

This study also includes variables to control the possible effect on stock price (Fama and French, 1992; Barth *et al.*, 1998; Collins and Xie, 1999; Burgstahler and Dichev, 1997; Aboody

et al., 2004; Becker *et al.*, 1998), including return on equity (ROE), debt level (LEV), firm size (SIZE) and profitability (LOSS). Again, the definitions of all variables utilized above have been included in Table I.

3.3 Sample selection

Our sample includes Taiwanese publicly listed firms. The sample years ranged from 2003 to 2013 inclusive. The corporate ownership structure and financial and stock data were collected from the *Taiwan Economic Journal* (TEJ) database. Our sample firm-years had to meet the following requirements. First, the TEJ database had to contain the required financial data for all necessary variables. Also, none of the sample firms could be in the finance and banking industry, as it is heavily regulated. None of the firms were utilities. Finally, observations accepted into the sample had to have their annual meetings in the period from April 15 to June 30[7].

These requirements resulted in a final sample of 7,456 firm-years for testing stock price relevance of board election on earnings and book value. Because one-year ahead earnings were required for testing earnings persistence in equations (1)–(3), but 2013 reported earnings were not available when current research was conducted, 785 observations had to be dropped. The sample for testing earnings persistence equaled 6,671 firm-years. The sample selection process is detailed in Table II.

4. Empirical results

Descriptive statistics for the dependent and independent variables of the 6,671 firm-years used in testing earnings quality are provided in Table III.

One objective of this study is to examine whether firms with current board elections will have earnings persistence given discretionary accruals and other governance mechanisms

Sample identification criteria	No. of firms
All firms with stock prices available from the beginning of January 2003 to April 30 2013 (excluding firms in finance and banking industries)	8,140
Less:	
Firms whose shareholding meetings were earlier than April 15 (because the stock price used in our sample was that of April 30)	(136)
Firms whose shareholder meetings were later than June 30	(477)
Firms with data missing	*(71)*
2003-2013 value relevance observations in firm-years	**7,456**
Less: 2013 observations for testing earnings persistence	*(785)*
2003-2012 earnings persistence observations in firm-years	**6,671**

Table II. Sample selection

Variable	Mean	Median	SD	Minimum	Maximum
EARN	0.055	0.045	0.096	−0.363	0.967
OCF	0.075	0.071	0.129	−1.960	1.271
NDA	−0.019	−0.026	0.069	−1.239	1.565
DA	−0.001	−0.002	0.105	−0.909	1.811
BD	0.334	0.000	0.472	0.000	1.000
CG	2.721	2.726	0.882	0.207	5.503

Note: See Table I for variable definitions

Table III. The descriptive statistics of variables for sample firms (n = 6,671)

than firms whose boards are not being elected in that year. Table IV presents a test of differences between firms undergoing the mandatory, every third year, board election and firms not undergoing the mandatory, every third year, election required under Article 195 of the Taiwan Company Law.

Table IV shows that the two groups of firms, with the grouping by whether a board election was taking place, did not differ on variables pertinent to the study.

Table V demonstrates that during board elections, companies tend to conduct opportunistic earnings management. As a result, the contribution of discretionary accruals to earnings persistence is reduced. The following models, previously presented in the equations (1)-(3), underlie the results in Table V.

Several conclusions can be drawn from Table V[8]. First, the positive coefficients for OCF, NDA and DA show that all three positively contribute to earnings persistence. Second, in equation (2), α_4, the coefficient of BD, is insignificantly positive. This suggests that board elections have no significant impact on earnings persistence. However, α_5, the coefficient of the interaction term DA × BD, is significantly negative. This shows that board elections significantly decrease the contribution of discretionary accruals to earning persistence. In other words, during board elections, earnings management is opportunistic. These results support *H1* that in the presence of board election, managers are more likely to engage in opportunistic discretionary accruals that reduce earnings quality. Our finding, therefore, that presence of board elections triggers earnings management is consistent with an

Table IV.
Mean difference between firms with board election and non-election

Variables	Election (n = 2,229) Mean	Non-election (n = 4,442) Mean	Difference	t-value	p-value
EARN	0.051	0.050	0.001	0.570	0.569
OCF	0.074	0.076	−0.002	−0.611	0.541
NDA	−0.018	−0.020	0.001	0.620	0.535
DA	−0.001	−0.001	0.000	0.120	0.904
CG	2.714	2.725	−0.011	−0.497	0.619

Note: See Table I for variable definitions

Table V.
The impact on earnings persistence of accruals, governance, board elections

Variables	Coefficient indicators	Equation (1) Coefficient (t-value)	Equation (2) Coefficient (t-value)	Equation (3) Coefficient (t-value)
Constant	α_0	0.026 (5.278)***	0.025 (5.009)***	0.021 (3.566)***
OCF	α_1	0.687 (64.582)***	0.687 (64.663)***	0.683 (63.180)***
NDA	α_2	0.655 (39.140)***	0.771 (21.498)***	0.677 (36.101)***
DA	α_3	0.618 (52.556)***	0.616 (52.461)***	0.636 (23.529)***
BD	α_4		0.002 (0.915)	0.000 (0.148)
DA × BD	α_5		−0.049 (−3.653)***	−0.082 (−2.785)***
CG	α_6			0.002 (2.015)**
DA × CG	α_7			−0.013 (−1.335)
DA × CG × BD	α_8			0.014 (1.980)**
Year		Yes	Yes	Yes
Industry		Yes	Yes	Yes
F		165.045***	155.456***	142.303***
Adjusted R^2		0.425	0.426	0.426

Notes: *** and ** denote significance at 1% and 5% levels, respectively; see Table I for variable definitions

"expropriation view", as addressed by Zhao and Chen (2008). In equation (3), the coefficient of DA × CG × BD, α_8, is significantly positive. This finding shows that good corporate governance will alleviate the negative relationship between earnings persistence[9] and the combined effect of board elections and discretionary accruals. In other words, good corporate governance helps to cut down opportunistic earnings management and alleviate the situation wherein board elections decrease the contribution of discretionary accruals to earning quality. Thus, *H2* is supported.

Overall, Table V demonstrates that during board election years, earnings persistence is negatively related to the occurrence of discretionary accruals itself and the interaction between director elections and discretionary accruals. However, better corporate governance arrangements moderate the relationship between discretionary accruals and director elections, on the one hand, and earnings persistence, on the other.

Next, we explore the impact of board elections on the value relevance of earnings and book value. As noted, discretionary accruals are rife for manipulative managerial pursuits and, in a board election year, may lead to higher earnings. In a board non-election year, however, the firm may find itself unable to continue managing earnings via discretionary accruals. Accordingly, earnings should be less persistent. An investor expectation of greater earnings persistence, based on perceived high-quality corporate governance, should impact the price at which the investor will buy shares of stock. Accordingly, we would expect the earnings measure EPS to interact positively with the corporate governance measure CG. This interaction term would be positively related to the firm's stock price. Board elections were shown to have no impact on earnings persistence, but did have a negative impact when the interaction of BD and discretionary accruals (DA) was tested. It was only when BD was paired with CG and DA that a positive result was found. This result suggests that CG stands as a surety of sorts that earnings calculated by these firms would persist because of the positive governance affects, as measured here. A follow-up question then becomes, if corporate governance helps support earnings persistence, will firms whose EPS and BV are calculated by firms with better corporate governance routines be associated with higher value relevance? These issues are explored in the empirical testing of *H3a*, *H3b* and *H4*. The results of those tests in equations (4)-(6) are shown.

Descriptive statistics for the variables used in equations (4)-(6) are presented in Table VI. Table VII presents a *t*-test comparing the means of firms that had a directors' election with those that did not have a directors' election.

Table VII shows that there were no significant differences between the groups on the variables of interest. Table VIII presents the regression analyses that test the relationship between the dependent variable, stock price (P) at the due date for release of the annual

Variables	Mean	Median	SD	Minimum	Maximum
P	26.791	15.995	43.221	0.570	1,054.540
EPS	1.864	1.310	3.617	−52.320	73.320
BV	18.075	15.690	10.759	0.071	171.947
BD	0.336	0.000	0.472	0.000	1.000
CG	2.735	2.743	0.882	0.207	5.503
ROE (%)	6.537	8.110	33.109	−118.261	54.351
LEV (%)	43.370	44.005	17.546	1.275	99.134
SIZE	15.835	15.658	1.352	11.119	21.438
LOSS	0.183	0.000	0.387	0.000	1.000

Note: See Table I for variable definitions

Table VI. The descriptive statistics of variables for sample firms (n = 7,456)

financial report, as mandated by Article 36 of Taiwan's Security and Exchange Act, and the independent variables.

The results in Table VIII show that, first, β_1 and β_2, the coefficients of variable EPS and BV, respectively, are positive in all three equations, thus indicating that EPS and BV are both positively related to share prices. Second, the coefficients of the interaction term in equation (5) show that board elections will decrease the value relevance of EPS ($\beta_7 < 0$) and increase that of BV ($\beta_8 > 0$). This indicates that in the presence of board elections, when valuing a stock, investors seem to decrease their reliance on earnings information and rely more on book value. This makes sense given that, on a percentage basis, an increase (decrease) in DA will have a heavier percentage increase (decrease) in EPS than in BV, given that EPS represents a flow concept, whereas BV largely represents a stock concept whose value fluctuates less from year to year in both absolute and percentage terms than does EPS, because of discretionary accruals. These findings support both *H3a* and *H3b*.

Table VII.
Mean difference between firms with board election and non-election (n = 7,456)

Variables	Election (n = 2,504) Mean	Non-election (n = 4,952) Mean	Difference	t-value	p-value
P	26.766	26.803	−0.037	−0.035	0.972
EPS	1.833	1.880	−0.047	−0.528	0.597
BV	18.082	18.071	0.011	0.041	0.967
CG	2.733	2.737	−0.004	−0.184	0.854
ROE (%)	6.342	6.636	−0.294	−0.362	0.717
LEV (%)	43.410	43.350	0.060	0.138	0.890
SIZE	15.845	15.830	0.015	0.447	0.655
LOSS	0.187	0.182	0.005	0.501	0.616

Note: See Table I for variable definitions

Table VIII.
The value relevance of earnings and book value, governance and board elections

Variables	Coefficient indicators	Equation (4) Coefficient (t-value)	Equation (5) Coefficient (t-value)	Equation (6) Coefficient (t-value)
Constant	β_0	−3.681 (−0.747)	−3.648 (−0.742)	−1.179 (−0.235)
EPS	β_1	6.266 (35.251)***	6.795 (34.127)***	4.068 (12.601)***
BV	β_2	1.274 (22.298)***	1.210 (20.150)***	1.343 (18.164)***
ROE	β_3	−0.210 (−15.671)***	−0.218 (−16.235)***	−0.216 (−16.161)***
LEV	β_4	0.098 (4.040)***	0.095 (3.917)***	0.089 (3.740)***
SIZE	β_5	−1.014 (−3.127)***	−0.999 (−3.084)***	−1.034 (−3.146)***
LOSS	β_6	20.141 (18.271)***	19.876 (18.055)***	15.803 (13.971)***
EPS × BD	β_7		−1.642 (−5.891)***	−1.792 (−3.677)***
BV × BD	β_8		0.204 (3.857)***	0.179 (2.235)**
EPS × CG	β_9			3.479 (10.009)***
BV × CG	β_{10}			−0.250 (−3.873)***
EPS × BD × CG	β_{11}			0.360 (0.605)
BV × BD × CG	β_{12}			0.004 (0.034)
Year		Yes	Yes	Yes
Industry		Yes	Yes	Yes
F		205.262***	195.699***	184.685***
Adjusted R^2		0.482	0.485	0.496

Notes: *** and ** denote significance at 1% and 5% levels, respectively; see Table I for variable definitions

In equation (6), we also find that the interaction of EPS and BD (β_7) is significantly negative at the 1 per cent level, whereas the interaction of BV and BD (β_8) is significantly positive at the 5 per cent significance level. Thus, in the presence of board elections, the value relevance of EPS declines, but the value relevance of BV increases, consistent with the earlier finding in equation (5). However, the three-way interaction terms of EPS × BD × CG (β_{11}) and BV × BD × CG (β_{12}) are positive, but both of them are statistically insignificant. Therefore, better corporate governance may still enhance the value relevance of EPS[10] but does not significantly increase too much the reliance of investors on financial accounting information for firms in which director elections were held. This finding does not fully support *H4*.

5. Conclusion

This study explores the impact of discretionary accruals, given the potential moderating effect of board elections (BD) and corporate governance (CG), on earnings quality and the value relevance of earnings (i.e. EPS) and book value (BV) on the firms' stock prices, given the potential moderating effects of director elections and corporate governance. We find that the use of discretionary accrual activity in the presence of directorship elections leads to reduced earnings persistence, thus indicating that the discretionary accruals used represent poorer quality additions to earnings. Given that the presence of better corporate governance regimes reverses this effect, it seems that the discretionary accruals signaled better quality earnings in the presence of better corporate governance regimes. Accordingly, managements should realize that better corporate governance arrangements provide stockholders with greater assurance as to the quality of earnings.

We also found that the value relevance of both EPS and BV are positive when their values are tested against stock prices. This should be expected. A more interesting finding is that we found a negative relationship between the interaction term for BD and EPS, on the one hand, and stock prices, on the other. This indicates that directorial elections reduce the value relevance of EPS. Once, however, we created the three-way interaction term, including CG, EPS and BD, and the result turned positive, if insignificantly so. Consistent with our earlier results, these results argue for the importance of good corporate governance in *perhaps* helping assure the credibility of accounting numbers. Further, we found that BV as a separate variable in the value relevance regression is very strongly and positively related to stock price. As noted, the interaction of BD and BV was also positively related to stock prices. As BV is more of a stock than a flow concept than EPS, BV carries over value from not only the two previous years, years in which directorial elections were not held, but also from the beginning of the firm itself. It is less surprising, therefore, that the interaction term for BV × BD was positive, whereas the interaction term of EPS × BD was negative. For investors, the implication of these findings is that BV is a better guide to corporate value than EPS in situations where corporate governance is of questionable quality given the presence of board elections. For managers, a clear implication is that attempts to manipulate earnings are of doubtful utility without taking the perceived strength of corporate governance into account. Improving corporate governance enough, of course, may obviate the ability of management to engage in such manipulations at all.

The results presented here indicate the importance of better corporate governance in diffusing suspicions of management occasioned by the use of discretionary accruals in years in which board elections take place. Better corporate governance regimes led to a more positive relationship of discretionary accruals to earnings persistence, even in the presence of directorial elections. Similarly, better corporate governance regimes led to a more positive relationship between EPS and stock prices.

To obtain these results, we used Taiwanese data because Article 195 of Taiwan's Company Law requires triennial board of director elections, and staggered voting is not allowed. This restriction of testing locale is a limitation of this research. It may be argued, therefore, that our results reflect the relationship between the variables tested as found within a particular locale. However, Taiwan is heavily integrated into the global economy, with Taiwanese firms having – and being exposed to – business and corporate governance practices across the globe. Given the robust controversies with respect to the use of staggered boards of director elections or non-staggered boards of directors elections and the impact of both on the welfare of shareholders, the information provided here should be of great interest to regulators in the UK, the USA and across the globe. These results help establish that non-staggered board of directors elections may have important consequences for earnings quality and the value relevance of earnings and firm book value. While the locale used here was Taiwan, practice in the USA is for non-staggered board elections to be held every three years. Further, the 2010 UK corporate governance code revision stated that non-staggered elections should occur at least once within every three years for FTSE 350 firms. Therefore, the results of this study provide further guidance with respect to the consequences of US practice for firms using non-staggered board elections, UK FTSE 350 and other firms that move to non-staggered board elections at least once every three years. In the wake of the corporate scandals that have rocked the globe since the fall of Enron and Worldcom in 2001, we believe that it is important to examine whether the relationships found here also exist in other nations.

This study examines the relationship between non-staggered boards of elections occurrence, earnings manipulation and quality and corporate governance. It does not examine whether poor reported earnings have an impact on the likelihood of directors being replaced. The results reported here would be suitably deepened through the pursuit of such a study (Asthana and Balsam, 2010). Board replacements, unlike the arrangements studied here, may be a result of many things, for example, voluntary resignations and the demise of a member or of a board member being ousted from his/her perch on the board. Understanding the interplay between corporate reporting practices and a board member's seemingly voluntary resignation, or board members being ousted, or perhaps other indicia of conflict among board members would an extremely useful extension of the work reported here, as it would contribute meaningfully to the field's understanding of board functioning. The difficulty in pursuing such a study, however, is the current lack of available data.

Notes

1. Solomon (2012), for example, notes about staggered boards that "Companies with such boards have been found to have lower value, a greater likelihood of making acquisitions that are value-destroying, and a greater propensity to compensate executives without regard to whether they actually do a good job". Solomon (2012) also notes, however, that companies with staggered boards tend to receive higher takeover offers than companies with non-staggered board elections. Please also see Shareholder Rights Project [http://srp.law.harvard.edu/ (accessed 27 July 2014)].
2. Whether boards are staggered or not, they may still be ineffective at protecting presumed shareholder interests. Other factors may play a role too. For example, Ebrahim (2007) noted that greater audit committee and board independence is associated with less earnings management. Also, more active audit committees, but not boards themselves, were also associated with less earnings management.
3. Note that we are not studying director replacement decision-making. That is, directors may step down from the board for many reasons, including health, time constraints, personality conflicts with others on the board and death. These out-of-time needs for replacement do not concern us. Our sole concern is when the board as a whole – in the Taiwanese context – stands for election.

Understanding the determinants of individual board member decisions to step down is an interesting topic in itself. It is not, however, the topic explored here.

4. see www.socialfunds.com/news/print.cgi?sfArticleId=2960 (accessed 27 July 2014).
5. The weblink of Taiwan's Company Law is http://eng.selaw.com.tw/FLAWDAT01.asp?LSID=FL011292
6. Whether boards can indeed perform such a role has come into doubt. Ronen and Yaari (2008), for example, note that Farinha (2003, p. 34) states that managers have the power to control the board via management's choices of outside directors and information to provide to the board.
7. We chose firms that hold annual meetings between April 15 and June 30, because Taiwan's Security and Exchange Act requires a company's annual report to be filed by April 30. The date of record for share ownership for board election was usually set to two months before board elections. Further, most nonfinancial companies had their board elections within two months after releasing their annual report.
8. In all regressions reported, we conducted multicollinearity diagnostic tests by computing the variance inflation factors (Kennedy, 2000) for all variables used in the regression analyses. None of these factors displayed a value greater than 10, thus indicating a lack of multicollinearity. This held true in all regressions.
9. We also perform separate statistical tests (untabulated) with respect to whether better corporate governance is able to enhance the earnings persistence of a company. The interpretation of these findings is that better corporate governance leads to better earnings quality, as manifested in greater earnings persistence.
10. Our untabulated results show the impact of corporate governance on value relevance of EPS and BV. The interaction of EPS and CG and the interaction of EPS and BV show that when valuing a stock, investors will increase their reliance on earnings information, which increases the value relevance of EPS, if good corporate governance is in place and relatively reduced reliance of investors on equity information. As Table V demonstrated earlier, board elections decrease the contribution of discretionary accruals to earnings quality and good corporate governance alleviates opportunistic earnings management.

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Appendix. Discretionary accrual estimation

Discretionary accruals are estimated using the modified Jones model (Dechow *et al.*, 1995; Walker, 2013). The model used is further modified by cross-sectional industry-specific data input (different companies in the same industry during the same time period). In the first step, total accruals are estimated, and these are represented by the difference between net income from continuing operations and operating cash flows:

$$TA_{it} = NI_{it} - OCF_{it},$$

where:

TA_{it} = total accruals for firm i in year t;
NI_{it} = net income from continuing operations for firm i in year t; and
OCF_{it} = operating cash flows.

The modified Jones model for estimating the parameters of non-discretionary accruals is expressed as follows:

$$\frac{TA_{it}}{A_{it-1}} = \gamma_0 \frac{1}{A_{it-1}} + \gamma_1 \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{it-1}} + \gamma_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

where:

TA_{it} = total accruals for firm i for year t;
A_{it-1} = total assets for firm i for year t − 1;
ΔREV_{it} = change in net revenues for firm i for year t;
ΔAR_{it} = change in accounts receivable for firm i for year t;
PPE_{it} = gross property plant and equipment for firm i for year t; and
ε_{it} = error term for firm i for period t.

The non-discretionary accruals (NDA_{it}) are calculated after incorporating the parameters of nondiscretionary accruals as follows:

$$NDA_{it} = \hat{\gamma}_0 \frac{1}{A_{it-1}} + \hat{\gamma}_1 \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{it-1}} + \hat{\gamma}_2 \frac{PPE_{it}}{A_{it-1}}$$

As the last step, discretionary accruals (DA_{it}) are calculated by using the parameters estimated in the above equation:

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

where DA_{it} represents the discretionary accruals for firm i at the event year t.

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