Corporate Boards and Company Performance: review of research in light of recent reforms

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Recent US corporate governance reforms introduced extensive regulations and guidelines for public corporations, particularly corporate boards. This article evaluates the extent to which empirical research on corporate boards and firm performance supports these reforms. Building on the meta-analysis conducted by Zahra and Pearce (1989), we review 105 studies published between 1989 and 2005. We find most of the practices mandated by the Sarbanes-Oxley Act of 2002, and the regulations issued by the New York Stock Exchange (NYSE) and the NASDAQ, had not been subject to prior study. Where board characteristics have been studied, we find limited guidance for policymakers on identifying governance practices that result in more effective firm performance. In an effort to increase the relevance of future research on boards and firm performance, we provide a framework on corporate boards.

Keywords: Corporate performance, evaluation of the board, board of directors

Introduction

This article summarises the key elements of recent U.S. corporate governance reforms and analyses whether there is support for these reforms in the last 16 years of empirical research on corporate boards and firm performance. This timeframe was chosen to cover the research since the last comprehensive review on this topic, conducted by Zahra and Pearce in 1989. We not only update their review of the literature, but also extend it to cover areas not covered in their original review: director compensation and ownership and the impact of shareholder activism. We also extend the review to cover the growing international body of research on board characteristics and firm performance.

We included studies that met three criteria: they 1) featured statistical tests of the relationship between corporate boards of company performance; 2), were published in the main peer-reviewed journals that deal with corporate governance, and 3) appeared after 1989. The main company performance variables used in the literature are financial and/or stock market measures, but in keeping with the thrust of recent reforms we included studies that measured financial reporting, fraud, or bankruptcy as outcome measures.

We identified 105 studies that met these three criteria. Theoretical papers, qualitative research, and empirical studies that did not include performance may be referred to in the text, but are not considered part of the core sample.

We find that despite a large volume of corporate governance research across many academic disciplines in the last 16 years, most of the practices mandated by the Sarbanes-Oxley Act of 2002, and the regulations issued by the New York Stock Exchange (NYSE) and the NASDAQ, had not been subject to prior study, although a few have recently received attention. And for those board characteristics that have been studied there is, at best, weak guidance for policymakers on what governance practices will lead to more effective firm performance. We conclude with a framework to try to increase the relevance of future research on boards and firm performance.

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Corporate governance reforms

The Sarbanes-Oxley Act was enacted in 2002 to restore public confidence in the governance of public corporations. It established a new Public Accounting Oversight Board, imposed new regulations regarding the auditing of public corporations, and instituted a number of new requirements for public company boards. The main changes were: all members of the Audit Committee must be "independent" directors, at least one member of the Audit Committee must be considered a "financial expert," loans from the company to any director or executive are prohibited, and any transactions relating to the company by directors must be disclosed. In addition, the CEO and CFO must personally certify that the audit of their firm is complete and accurate and must show that the firm has the systems and processes in place to detect any financial or ethical improprieties.

In 2003, both the NYSE and NASDAQ adopted new corporate governance rules. The substance of the two stock exchanges' reforms is very similar, so we will summarise them together. First, listed companies must have a majority of independent directors. Independence now requires that individuals have "no material relationship with the company" – i.e., that they are not recent employees, family members, nor part of interlocking directorships. Second, a number of practices related to board committees are mandated. For example, charters for nomination and compensation committees, and annual evaluations of committees, are required.

Audit committees must establish an audit function and all of their members must be financially literate. Other mandates include: only independent directors can serve on nominating and compensation committees, shareholders must be given an opportunity to vote on equity-compensation plans, boards must hold regular executive sessions with non-management directors, the full board must approve compensation packages and director nominations, corporate governance guidelines and a code of business ethics must be adopted, and boards must include training for directors and annual board evaluations.

A common theme in these reforms is an agency-theory perspective that seeks to strengthen the role of the board as the representative of the company's shareholders by increasing independence of directors. The reform's emphasis on the monitoring function of boards aligns with the agency-theory focus of much of the board literature, but stands in contrast to the conclusions of the reviews by Zahra and Pearce (1989) and Johnson, Daily, and Ellstrand (1996) which stress the multiple roles that boards play.

Another common element in these reforms is, as our review of the literature will show, that there appears to be little evidence to indicate that any of the new practices have consistently been shown to have a positive effect on corporate performance, as measured by financial performance. This is not to say that they will be ineffective, but rather that none of these practices appear to have been derived from, nor received clear support from, corporate governance research.

Most elements of the reforms seem intended to serve as protection against gross malfeasance at the expense of board practices and structures associated with positive firm performance, suggesting regulators were primarily concerned with restoring investor confidence in response to the wake of corporate scandals. This may also apply to non-U.S. markets, as Alves and Mendes (2004) argue the code of best practices issued by the Portuguese Stock Market Commission (2004) give little consideration to the effects on performance.

Review of research

Board structure – duality

The results of research on the effects of duality on company performance are ambiguous. Most studies using stock market measures have found no significant effects (Daily and Dalton, 1992, 1997; 1993; Rechner and Dalton, 1989; Baliga *et al*., 1996; Brickley *et al*., 1997). Studies that have looked at financial measures have shown mixed results with some indicating that duality enhanced performance (Daily and Dalton, 1994; Donaldson and Davis, 1991; Kiel and Nicholson, 2003 for Australian firms), while others (Coles, McWilliams, and Sen, 2001; Rechner and Dalton, 1991) showed negative impact.

It is hardly surprising that the research on duality has yielded inconclusive results as most studies examine U.S. firms where historically fewer than 3 per cent of large companies have had chairs who were not currently or previously executives of the firm. Brickley *et al*. (1997) found that when comparing chairs held by owners or former employees with those who are truly independent, having a split CEO/chair does not have a significant effect on long-term financial performance, nor does a shift in leadership structure lead to a change in short-term stock market performance.

A potentially promising line of research has focused on whether there are certain

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conditions under which having a non-executive chair is more or less important for performance. Rhoades, Rechner, and Sundaramurthy (2001) found support for a contingency perspective in a meta-analysis of 22 duality studies conducted between 1972–1996. They conclude that when accounting for prior firm performance, decision context, and differences in study coding techniques, 19 of the 22 studies examined provide support for duality enhancing firm performance. They find support for the contingency model suggested by Finkelstein and D'Aveni (1994), which suggests independent board structure is beneficial when the firm has been experiencing strong financial performance, and there is increased potential for entrenchment. Likewise, Rhoades *et al* (2001) propose an independent board structure may be detrimental when firm performance – and management power – is weak, increasing the need for strong leadership and unity of command.

Boyd (1995) found that in industries that were resource-constrained or higher in complexity having one person fill both roles was positively related to return on investment (ROI), while overall duality was not significantly related to ROI. A study of Chinese companies (Peng, 2004) making the difficult transition from state-owned enterprises to publicly-traded joint stock companies (JSCs) also found that firms with a unified chair-CEO had higher sales growth (but not ROE). In contrast, Haleblian and Finkelstein (1993) found that firms in a turbulent environment performed worse (based on a composite of return on assets, return on sales, and return on equity) when the firm had a dominant CEO, measured in part by whether the CEO was also chair.

The results are also mixed on the impact of duality on firms in crisis situations, such as a firm faced with bankruptcy. Several studies have found that companies with a unified CEO/chair had a higher bankruptcy rate. Dunn (2004) argues this is because firms where power is concentrated in a single CEO/chair are more likely to file fraudulent financial statements. Ranft and O'Neill (2001) suggest another potential reason, as they found that in start-up firms the founder often serves as chair and CEO, and they tend to have weaker boards. On the other hand, another set of studies has found no relationship between duality and bankruptcy rates (Chaganti, Mahajan, and Sharma, 1985; Daily, 1995).

Board structure – insider-outsider ratio

The many empirical studies that have examined the impact of the insider-outsider ratio on boards have found no consistent evidence to suggest that increasing the percentage of outsiders on the board will enhance performance. If anything, they suggest that pushing too far to remove inside and affiliated directors may harm firm performance by depriving boards of the valuable firm and industry-specific knowledge they provide (Fama and Jensen, 1983; Baysinger and Hoskisson, 1990).

A few studies identified a positive relationship between the percentage of outside directors and firm performance (Schellenger *et al*., 1989; Pearce and Zahra, 1992; Daily and Dalton, 1993), while other studies found no significant relationship between board composition and company performance (Mallette and Fowler, 1992; Daily and Johnson, 1997; Bhagat and Black, 1999; Hermalin and Weisbach, 1991; Klein, 1998; Dulewicz and Herbert (2004) for the UK). Peng (2004) analysed a sample of China's largest public companies and found that increasing the percentage of independent directors had no impact on either ROE or sales growth, but that adding more affiliated, outside directors, was linked to higher subsequent sales growth (but not ROE). He attributes this result to the role these directors play in securing resources for the firm as part of Chinese business networks. Bhagat and Black's (2002) study of 934 large U.S. firms found that those with a higher percentage of outside directors had significantly lower financial (ROA and ROS) and stock market (Tobin's Q) performance in the following three years. They also found that lower-performing firms were more likely to add independent directors, a finding supported by Hermalin and Weisbach (1988) and Pearce and Zahra (1992).

These studies failed to show, however, that adding independent directors improved subsequent performance. Dahya and McConnell (2005) examined this question in the United Kingdom, assessing the relative performance of U.K. firms that complied with the influential 1992 Cadbury Report's recommendation that all public firms have at least three independent directors. When controlling for prior performance, firms adding outside directors demonstrated improved ROA performance of nearly 200 basis points (annualised) a slower growth rate in operating expenses.

Trying to explain these conflicting findings, Dalton, Daily, Ellstrand, and Johnson (1998) and Wagner, Stimpert, and Fubara (1998) conducted meta-analyses of the research on board composition and performance. Dalton *et al*.'s (1998) analysis of 54 studies found no evidence of a link between insider-outsider ratio and company financial performance, and showed that neither the size of the company, nor the

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measures used for director type or company performance, affected the findings. Wagner *et al*. (1998) analysed 29 studies and found similar results, with their meta-analysis indicating that increasing the number of insiders or outsiders had a positive effect on performance, suggesting that board size may be more important than composition. They also found some evidence of a U-shaped relationship between the insider-outsider ratio and performance, as boards with a very high or low percentage of insiders performed better than those with a more even mix of insiders and outsiders. In contrast, Barnhart, Marr, and Rosenstein (1994) and Barnhart and Rosenstein (1998) found evidence of a reverse, curvilinear relationship between the percentage of independent directors, as classified by Institutional Shareholder Services (ISS), and some performance measures. They reported that firms where boards have a clear majority of independent directors or very few independent directors had lower stock market performance.

Other studies have explored under what circumstances board composition can affect performance. Filatotchev and Bishop (2002) found that U.K. firms going public were significantly more likely to under price their IPOs when outsiders constituted more than one-third of directors. Having more outsiders on the board was also associated with less risky investments by the firm (Ellstrand *et al*., 2002), including lower spending on R&D (Xie *et al*., 2003). In the case of acquisitions, where agency problems may be particularly severe, having a higher percentage of independent directors appears to yield greater returns to shareholders (Lee *et al*., 1992). Finally, Hutchison, and Gul (2004) examined large Australian companies and found that outsider representation and ownership are particularly important in firms with large growth opportunities. Kesner and Johnson (1990) and Helland and Sykuta (2005) also find that, when controlling for firm performance, companies are more likely to be sued by shareholders if they have more insiders on the board, but that board composition did not affect the outcome of these lawsuits.

While overall board composition does not show a clear link with performance, the presence of more independent directors may encourage more ethical behavior and stronger oversight in board committees. Providing some recent research support for this aspect of Sarbanes-Oxley and the stock exchange reforms, Xie *et al*. (2003) and Park and Shin (2004) found that having more outside directors on the board with corporate or financial experience was related to lower levels of earnings management. Xie *et al*. (2003) reported this also holds for having more financial experts on the audit committee, while Park and Shin (2004) found earnings management is further reduced by the presence of active institutional shareholders on the board. Klein (1998) analysed the insider-outsider ratios of board committees of S&P 500 companies and found having more insiders on finance and investment committees was positively related to both company financial and stock market performance. The insider-outsider ratio on the more common audit, compensation, and nominating committees did not have a significant relationship with firm performance, although she found, contrary to her hypothesis, that having a higher percentage of outsiders on the compensation committee was negatively related to firm productivity.

Some innovative studies have linked outsider representation to a set of outcomes beyond the performance measures typically used in governance research. First, Daily and Dalton (1994) found that management-dominated boards, with a lower percentage of independent directors and a CEO who is also chairman, were more likely to go bankrupt. Follow-up research by Daily (1995) showed that firms with more outside directors were more likely to emerge from Chapter 11 with a successful reorganisation, and less likely to liquidate. Other studies have examined the impact of board composition on CEO succession and pay. Boeker and Goodstein (1991) found that in poorly performing firms, insider-dominated boards were less likely to replace the CEO with an outsider. Conyon and Peck (1998) found that firms with outsider dominated boards are better able to hold top management compensation in line with firm performance. Finally, Johnson and Greening (1999) found that having more independent directors was associated with superior social performance by firms as measured by higher quality, more environmentally friendly products, workforce diversity, and good community relations.

Board structure – size and stability

There has been relatively little empirical research directly focused on the impact of board size on performance that could help determine the validity of these two perspectives. Fortunately, however, many board studies have included the number of directors, either as a control variable or as part of analysing the insider-outsider ratio. Dalton *et al*. (1999) conducted a meta-analysis of 27 studies that featured a board size variable and found having more directors was associated with higher levels of firm financial perfor-

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mance. This result held true for firms of all sizes, but the effect of board size on performance was greater for smaller firms. In contrast, De Andres, Azofra, and Lopez (2005) analysed ten developed markets, including the United States, and found a negative relationship between board size and firm performance as measured by 12-month equity market-to-book value, although the convex patterns of results suggested negative impact decreased as board sizes were larger. Kiel and Nicholson (2003) reported a positive correlation between firm size and performance (three year average of Tobin's Q) for public companies in Australia.

The individual studies that have concentrated on the effect of board size on performance have also reported mixed results. Yermack (1996) found firms with smaller boards performed better on both financial measures and market valuation, while Daily and Dalton (1993) and Walsh and Seward (1990) reported that larger boards had better financial performance, while Helland and Sykuta (2005) concluded that firms with smaller boards are more likely to be the targets of shareholder litigation. Denis and Sarin (1999) found that adding more directors was associated with subsequent improvements in market-adjusted returns. The impact of board size may in part be contingent on the size and health of the firm. In a study of 879 Finnish firms, Eisenberg *et al*. (1998) showed companies with smaller boards had higher ROA.

Crutchley *et al*. (2002) analysed the post-IPO performance of U.S. firms that went public in 1993–94, and found that a larger board in a poorly performing firm was associated with subsequent performance improvement, while having a larger board in a high-performing firm slowed subsequent performance improvement. This study also indicated that firms with more stable boards outperformed their peers, while firms that performed poorly had more director turnover. Since firm performance did not improve when replacements were added to the board, Crutchley *et al*. (2002) concluded this was a case of directors "jumping ship" rather than the ousting of poorly performing directors.

Board ownership

There have been enough studies of director equity ownership and firm performance to merit another meta-analysis, but inconsistent findings lead Dalton *et al*. (1999) and Mehran (1995) to conclude that few systematic relationships exist. In cases where a significant relationship has been found, it is often attributed to moderating circumstances such as high-growth or environmental dynamism. For example, Kesner (1987) examined 250 *Fortune* 500 companies and found that the percentage of shares owned by directors was strongly related to performance in high growth industries and unrelated in more mature industries. She concluded that board involvement in strategic decision-making is relatively more important in rapid growth environments, and directors who have a large stake in the company are more vigilant in decisions that drive company performance. Studying a large sample of firms in the relatively weak governance environment that existed in South Korea before the Asian financial crisis, Joh (2003) found less concentrated board ownership was associated with lower profitability.

Additional research suggests the relationship between ownership and performance is not strictly linear. Gedajlovic and Shapiro (1998) examined this relationship in public companies in five countries and found that in the U.S. and Germany, greater board ownership reduced ROA until ownership reached a very high percentage (43 per cent in the U.S. and 70 per cent in Germany) and then had a positive relationship, while in Canada, France, and the U.K. they found no relationship. Other studies of U.S. firms have concluded that firm performance increases with board ownership until ownership concentration reaches a point above 25 per cent to 40 per cent where it begins to have adverse effects on performance (Barnhart and Rosenstein, 1998; McConnell and Servaes, 1990; Morck, Shleifer, and Vishny, 1988). Thomsen and Pedersen (2000) found a similar result in a study of large European firms.

These studies do not address why the interests of large shareholders would differ from other owners, only that these individuals can exert more influence if they wish to pursue non-value-maximising behavior. Finally, Barnhart and Rosenstein (1998) suggest the causal relationship between ownership, board composition, and firm performance is not entirely clear. They argue firm financial performance may actually drive insider representation and board ownership rather than the reverse. In other words, strong performance may allow insiders to retain large ownership stakes and control of the board of directors.

Other studies address situations where desires of shareholders and board members diverge and additional monitoring behavior affects performance. For example, Bhagat, Carey, and Elson (1999) found that if directors of S&P companies have a larger ownership stake, they were more likely to replace the CEO when a company is under-performing. A number of other studies have also examined the relationship among diversification

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strategy, restructuring, and R&D spending and director ownership as an indicator of the alignment between boards and shareholders (Bethel and Liebeskind, 1993; Baysinger, Kosnik, and Turk, 1991; Hill and Snell, 1988; Hoskisson, Johnson, and Moesel, 1994). These studies generally find that greater board ownership promotes shareholder interests. These studies are based on the implicit agency assumption that shareholder and management interests may need to be aligned through board monitoring.

Director rewards

Directors are compensated in a variety of ways, including retainers, meeting fees, and stock awards or options. The causal direction between director pay, board monitoring, and company performance is not clear, however. For example, Hempel and Fay (1994) found that outside director compensation was driven by board size and meeting frequency and not firm performance, while Boyd (1994) found firm profitability significantly predicted board compensation. Neither of these studies, however, used samples that reflect the significant growth in director compensation over the last decade or stock-based compensation that has accounted for most of this growth.

Two U.S. studies examined director stock compensation specifically. These studies take contrasting views, but together they suggest that firm performance may drive director compensation rather than other way around. Cordiero and colleagues (2000) used a 1999 Pearl Meyers and Partner survey to examine whether prior performance predicted director compensation. They found firm performance positively correlated with director compensation and that high company growth leads to greater stock compensation. Cordeiro *et al*. (2000) argue that stock compensation is used to motivate the greater relative effort required from directors as businesses grow, but don't address why director effort is more important in a growing business than a failing or stagnant one. On the other hand, Vafeas (1999) did not find a significant link between director stock incentive plans and post-adoption performance using a matched sample of large firms with and without director incentive plans. Surprisingly, Fernandes (2005) found that for Portuguese firms the only time board member compensation was related to shareholder performance was when all of the board members were insiders.

Most research on boards and compensation, however, has focused on pay for executives rather than directors (e.g., Tosi and Gomez-Mejia, 1994; Gomez-Mejia and Wiseman, 1997). Core, Holthausen, and Larcker (1999) found that boards with strong CEOs tend to pay them above what would be predicted by firm size and industry, and Tosi and Gomez-Mejia (1994) reported vigilant monitoring of CEO pay by boards was related to superior financial performance.

Several studies have also examined how governance practices affect the use of incentives for executives. Mishra and Nielsen (2000) found that executive pay-for-performance might actually serve as a substitute for board independence in aligning shareholder interests and management incentives. They found that pay-for-performance was a better predictor of financial performance when there were fewer or shorter tenured independent outside directors. This fits with Zajac and Westphal's (1994) finding that firms whose CEOs hold smaller equity stakes in the firm had boards that were better equipped to monitor firm performance by virtue of more outside directors, director equity ownership, or separate CEO and chair positions.

Shareholder activism, corporate governance ratings and firm performance

According to Karpoff, Malatesta, and Walkling (1996), "the central tenet of shareholder activism holds that shareholder proposals ameliorate the shareholder-manager conflict and pressure managers to adopt value-increasing policies." We felt it would be beneficial to include a review of research on the impact of large institutional investors on boards, which was not part of Zahra and Pearce's earlier work.

Evidence for the impact of shareholder activism on firm performance is mixed, but the majority of studies report some positive impact. Nesbitt's (1994) assessment of equity performance of 42 US companies targeted by CalPERS found support for the long-term benefits of activism. Targeted companies subsequently outperformed the S&P 500 Index by 413 basis points per company over five years (or 7.2 per cent/year). Likewise, Opler and Sokobin (1998) found that 117 firms targeted by the Council of Institutional Investors (CII) outperformed the S&P 500 Index by 590 basis points for the year after listing (significant at the 5 per cent level), and by 920 basis points for the two-year post-listing period (not statistically significant), while a control group of poorly performing firms not targeted by CII failed to record similar performance improvements. Caton, Goh, and Donaldson (2001) also studied firms targeted by CII between 1991–1995, distinguishing between "performance-

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slack" companies (those expected to perform well but which actually underperformed as a likely result of poor decision making) and "non-performance-slack" companies (those whose underperformance was more likely from macroeconomic factors). They found CII's efforts raised levels of expected cash flows and improved equity performance only for the performance-slack companies.

Wahal (1996), however, found no significant outperformance for firms targeted by nine major institutional funds between 1987–1993. He concluded the long-term abnormal stock price performance, and operating or net income performance, remained weak even after targeting. He suggests returns reversals for both underperforming and overperforming firms, based on returns for the first and last year of targeting, implying reversion to the mean. English, Smythe, and McNeil (2004) controlled for returns reversal by matching targeted companies by size, book-to-market value, and prior five-year performance. They concluded short-term outperformance for firms targeted by CalPERS was limited to the first six months following the "announcement" of targeting.

Recent research on newly industrialised economies suggests that international investors reward firms that adopt Western-style governance practices. Mitton (2002), for example, studied 398 firms in five Asian countries and found that those that had better financial disclosure (defined as ADRs listed in the U.S. and use of a Big 6 accounting firm) and greater outside ownership of stock performed better following the financial crisis of the late 1990s, but there was no difference in performance in the two years prior to the crisis. This was consistent with a McKinsey study (Newell and Wilson, 2002) which compared the price/book ratio for 188 firms in six emerging economies and found that those which scored highest on an index of 10 good governance practices – i.e., open financial disclosure, equal voting rights for shareholders, a small board (five to nine directors) with no dominant owner, and a majority of outside directors – had a 10–12 per cent stock price premium over those with the lowest score on the index.

A promising area of research involves examining the less visible activism phase between institutional assessment of firm performance and the introduction of formal proposals. Wahal (1996) identified a positive wealth effect, measured by cumulative abnormal returns for "non-proxy" institutional activism for the six-day window surrounding the date of an institution's letter to the targeted firm. Gillan and Starks (2000) argue these types of proposals may serve as an effective negotiating tool for shareholders and refer to an "increased number of negotiated removals" from shareholder ballots.

Discussion

Boards research and governance reforms

This review of the last 16 years of research relating corporate boards and firm performance suggests that significant progress has been made in resolving some of the critical theoretical and empirical questions since the last major review of this literature (Zahra and Pearce, 1989). Researchers have developed new theory (Hillman and Dalziel, 2003), methods (e.g. Barnhart and Rosenstein, 1998), and data sources (e.g., Johnson and Greening, 1999), including surveys of board members (Lawler *et al*., 2002) that have helped create a more detailed and integrative understanding of board composition, practices, processes, and performance.

However, this review also highlights that research on corporate boards is largely disconnected from the key issues that have taken center-stage in recent corporate governance scandals. Most of the new governance reforms introduced have not been empirically examined, and in some cases the existing body of research casts doubt on whether the new enacted reforms will be effective (Romano, 2005). It was only after the passage of the Sarbanes-Oxley Act in 2002 that research (Park and Shin, 2004; Xie *et al*., 2003) on any of the practices required by the Act began to appear, the reverse of the desired direction in the relationship between research and policy. There had been no prior work on the performance impact of measures such as audit committee independence, demonstrating the financial expertise of audit committee members, the personal certification of financial reports by top executives, and the reporting of financial controls in the annual report. Similarly, many of the practices mandated by the NYSE and NASDAQ – requirements for executive sessions with non-management directors, adoption of committee charters, and board training sessions – have been subject to only very limited research (Lawler *et al*., 2002). Given the fact that these represent the largest public reforms of US corporate governance in decades, the absence of academic research on these topics is especially notable.

Only a few of the stock exchanges' reforms have been subject to rigorous empirical research in the academic community, and the findings vary on the effects of those practices. One reform that receives some research

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support requires listed companies to have a majority of "independent" directors with new definitions for what constitutes independence that go beyond traditional notions of outsider versus insider. Regulators' stricter definition of what constitutes director independence aligns with research that highlights how different ties between directors and management may reduce director independence (Daily and Dalton, 1994). And while numerous studies and two meta-analyses have found either no connection or limited performance effects for having a higher percentage of outside directors (Dalton *et al*., 1998; Wagner *et al*., 1998), there is evidence that firms with insider-dominated boards are less likely to replace CEOs when the firm is performing poorly (Boeker and Goodstein, 1991), more likely to go bankrupt (Daily and Dalton, 1994), less likely to emerge from Chapter 11 (Daily, 1995), and less likely to pursue socially responsible strategies (Johnson and Greening, 1999).

In other areas the research findings are negative, or inconclusive at best. For example, one major target of reforms is committee structures and membership. Sarbanes-Oxley, NYSE, and NASDAQ all mandate that audit committees be composed of independent directors. The exchanges go further to mandate inside directors not serve on nomination and compensation committees and that committee structures are formalised with charters. With a few notable exceptions (Xie *et al*., 2003; Park and Shin, 2004), there has been very little work examining the operation and effects of board committees. Klein (1998) found positive effects on performance for outsider representation on finance and investment committees, but not for the audit, compensation, and nominating committees addressed by the reforms. Romano (2005) surveyed 12 studies examining the probability of financial statement misconduct, and reported 10 found no benefit from a firm having an independent audit committee. And running directly counter to the reforms, Callahan, Millar, and Schulman (2003) found that the creation of a separate nominating committee and excluding the CEO from the process of selecting directors were both associated with a negative influence on company performance.

Another area of potential reform that has inconclusive research results is director compensation. Sarbanes-Oxley expressly prohibits loans to corporate officers, and the exchanges now require that shareholders have the opportunity to vote on equity compensation plans, topics on which there has been no research. More importantly, while the use of stock options for executive compensation and the accompanying size of CEO reward packages exploded in the late 1990s, the role that boards played and the long-term effects on company performance have not yet been systematically investigated. Recent reforms are intended to reduce the power of company insiders to influence their own compensation and increase transparency, including steps to increase the independence of compensation committees and new SEC guidelines introduced in 2006 that require firms to report the combined value of all rewards and benefits for the five highest paid employees. Supporting these reforms, Dalton and Daily (2001) have argued against the prevailing agency view in the governance literature that directors should be paid in stock to motivate alignment of interests with shareholders and strong vigilance. They counter that recent trends toward director stock compensation work against board independence by more closely aligning outside directors with executives (since stock incentives of directors are often structured similarly to executives) and creating potential conflicts of interest (since directors have power over granting stock and options.)

Finally, it is not clear that the reforms enacted actually align with the most recent research findings on board effectiveness. The body of research on board processes and dynamics suggests that collaborative and power-balanced boards appear to produce the best governance, suggesting reform efforts to limit or constrain the role of the CEO and insiders on boards may be counterproductive. For example, Westphal (1999) found that collaborative efforts (enhanced by social ties and friendship between members) were positively related to firm performance, while Callahan *et al*. (2003) observed that inside director involvement in the nomination process was associated with positive firm performance. Moreover, rules against interlocks may actually degrade cooperation between CEOs and boards as well as prevent boards from performing important roles other than monitoring (Gulati and Westphal, 1999).

A Framework for future research

Agency theory has historically dominated research on corporate boards and recent US reform efforts. The monitoring function is clearly a vital one for boards to play, and if anything it has become even more salient following the wake of recent corporate scandals and legislation. But monitoring is not the only role that boards play. Boards can also enhance company performance by providing strategic advice, securing external resources, developing managerial capabilities, and helping to manage the firm during a crisis (Johnson,

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Daily, and Ellstrand, 1996; Daily, Dalton, and Cannella, 2003). And outside the US, stakeholder models of governance, which emphasise the board's role in representing employee and community interests as well as those of owners, are more common (Yoshimori, 2005; Goyer, 2001; Kang and Shivdasani, 1995). What is needed, however, is a more integrative approach that acknowledges the practical reality that boards juggle these multiple roles simultaneously, and that effectiveness is likely to be determined by how well they can balance these different, and sometimes conflicting, functions. For example, how can a board provide an independent assessment of how well a company and its leaders are performing if the board has been actively involved in setting this strategy?

There are some encouraging signs that research is moving in this direction. Hillman and Dalziel (2003) propose a model that integrates agency and resource dependence perspectives. They argue that greater levels of "board capital" (a combination of directors' human capital and social capital) not only should enable boards to secure more resources and provide superior advice (as has been shown in prior research, e.g., Boyd, 1990; Westphal, 1999), but also enable boards to be more effective monitors of company performance (firm performance may best be ascertained through multi-variable measures). However, they contend that the extent to which boards exercise these capacities will depend upon the incentives given to directors, with greater pay in stock and more board independence predicted to generate greater attention to both monitoring and providing resources to the firm.

More research is needed to test this model and expand on this theory to examine the interplay of how other board roles, such as leadership development, may contribute to company performance. To guide such efforts we conclude by proposing a conceptual framework that explains the key hypothesised relationships between boards and firm performance, highlighting areas for future research (see Figure 1 below).

Board structure, composition, and practices. As new practices and structures are introduced and the composition of boards changes as a result of reforms or other forces affecting boards, it will be important to try to test whether these have an impact on firm performance. For example, as the percentage of women, minorities, and foreign directors slowly increases in U.S. boardrooms, it would be useful to examine how greater diversity affects board dynamics and company performance. Another potentially fruitful approach would be to extend Klein's and others' recent analysis of board committees, where much of the board's work is performed. There has been very little analysis of how committee structure and operation relate to firm performance.

There are several limitations to studies relying on proxy data, however, that suggest new research strategies are needed: 1) it has produced relatively weak and often contradictory findings regarding what board characteristics are significant predictors of firm performance, 2) this is hardly surprising, since the variables available from proxy statements are limited, and often represent poor substitutes for the theoretical concepts they are meant to test, and 3) proxy data sheds no light on the dynamics within the boardroom, which

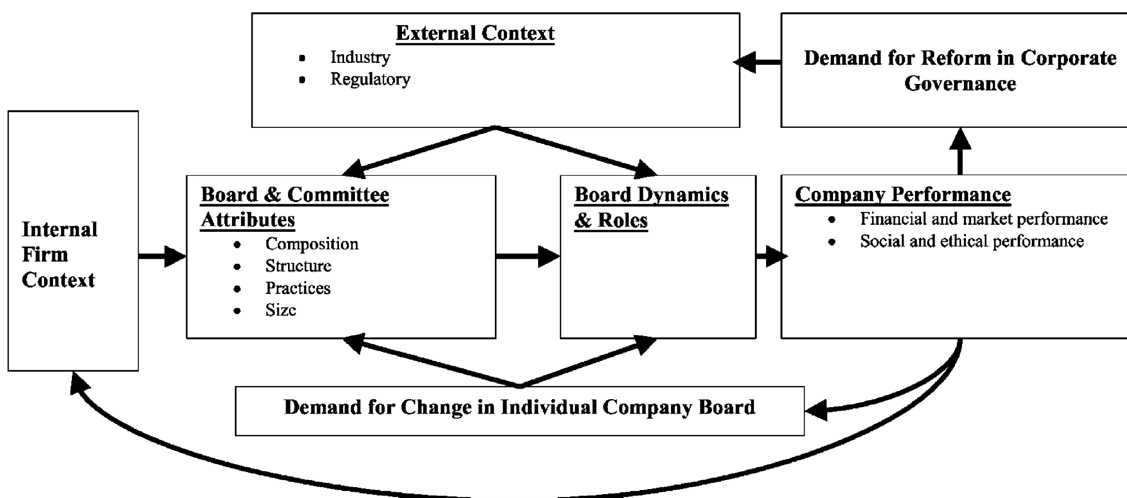

Figure 1: Corporate boards and company performance: a framework for future research

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our review suggests is at least as important as board composition and practices in explaining board effectiveness. In addition, some of the new regulations will reduce variability in key dimensions of boards – i.e., insider-outsider ratio – thus reducing the likelihood of finding a relationship with performance.

Board process and dynamics – Getting inside the black box. A few researchers have used a combination of interviews and surveys to enrich traditional data sources in an attempt to pry open the "black box" of boardroom processes and dynamics (e.g., Pearce and Zahra, 1991; Westphal, 1999; Lawler *et al*., 2002). While this approach shows great promise, it is not only limited by the smaller sample size and time-consuming nature of such research, but also by the current corporate governance environment. The new regulatory demands being placed on boards, the surfeit of consulting company surveys, and growing concern regarding disclosure of any information related to board activities that might be used in shareholder lawsuits have combined to make it even more difficult to gain access to boards for primary research.

Another potential avenue is to make use of new data sources, such as those used by consulting firms (e.g., GovernanceMetrics International, ISS, etc.) to rate firms on the quality of board governance (Johnson and Greening, 1999). While these rating systems combine diverse proxy and other more subjective measures of good governance practice that appear to be associated with firm stock and social performance (Brown, 2003), the growing influence of these ratings runs the risk of making it even more difficult to assess what board practices truly matter for better governance. This is because the rating firms provide clients with detailed guidance on what changes they need to make to their board in order to receive a top governance score, thus raising the prospect that boards may adopt a number of symbolic changes in practice or composition solely to boost their rating, rather than making a genuine effort to assess and improve board effectiveness.

A third potential, though obviously limited, way of enhancing our understanding of what occurs inside the black box is to simulate it. For example, Gillette, Noe, and Rebello (2003) conducted experiments to model board dynamics, using business school students to play the role of directors. They found in 30 different mock decisions when the board contained no one assigned to the role of outside director or watchdog, inside directors always chose value-destructive projects that benefited them individually. When outside directors comprised four of the seven directors, however, the adoption of value-creative decisions to the firm was the norm. Outside directors were most effective in promoting value-creative decisions when boards were regularly reshuffled into random groups – this effect did not remain robust when "boards" remained an intact group, as is common practice with nearly all corporate boards.

Board context. The literature on boards and performance is dominated by studies of large, public, U.S. firms. In particular, there is need for more longitudinal studies that can trace how boards evolve as firms pass through different stages of development (i.e., from start up to IPO to large public firm) and what board characteristics are most effective at each stage. Such longitudinal research would also make it possible to determine whether changes in board practices within firms make a difference to performance, in contrast to the majority of the research that has focused on cross-sectional comparisons. In addition, given regulators' focus on preventing future corporate scandals, it would be useful to have more research explore whether there are board attributes that promote more ethical corporate behavior (e.g., Harrison and Freeman, 1999) and attributes that make boards more effective in managing a crisis.

Broadening methods and measures of performance. Taken together, the studies published between 1989 and 2005 on the relationship between boards and firm performance offer conflicting or inclusive results. We cannot dismiss the possibility that the traditional firm metrics employed to this point may have limitations in measuring, or assessing, the complexities of a firm's governance strengths (Larcker *et al*., 2004). In addition, the environment in which companies are operating and the demands on boards have changed dramatically since 1989, and there is a need for a corresponding change in how the effects of boards on company performance are measured. As Zahra and Pearce urged, more studies in the last 16 years have added stock market performance measures along with indicators of operating efficiency (e.g., ROI, ROA) to assess corporate financial performance. It is only recently, however, that researchers (perhaps responding to the string of corporate scandals and governance reforms) have begun to analyse the effects of boards and their committees on other dimensions of performance, such as firm's ethical behavior as measured by the extent to which firms are guilty of fraud (Dunn, 2004), the likelihood of a firm being sued by shareholders (Helland and Sykuta, 2005), or questionable management of their reported earnings (Xie *et al*., 2003; Park and Shin, 2004). Helland and Sykuta (2005)

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also note that performance variables such as accounting returns and Tobin's *Q* are indirect measures of the extent that a board's efforts protect shareholder interests.

The regression analysis employed in most studies addresses statistical relationships but does not necessarily offer explanatory power. Reforms, on the other hand, assume a causal relationship between corporate boards and firm performance. As researchers employ methodologies with explanatory power, we can learn more about the causality and maintenance of effective corporate boards.

As governance research goes forward, it would be useful to extend the measures of performance further to reflect the range of stakeholders and different objectives that boards are attempting to satisfy. Indicators of board effects on corporate misbehavior could be broadened to include measures such as the extent to which firms have been subject to whistle blowers or lawsuits, and whether the CEO or top executives appear to be systematically over-paid relative to firm performance or are accused of unethical behavior. Conversely, it would be beneficial to build on Johnson and Greening's (1999) pioneering work, to look at the relationship between board structure and practices and measures of corporate social performance. The greatest advances, however, could come from combining these different measures – financial, ethical/legal, and social performance – to see if there are trade-offs among the different roles boards play and whether certain types of boards perform better on some measures than others. A complete assessment of the relationship between boards and company performance would include the costs as well as benefits of board actions. While difficult to measure without access to detailed internal company data, such research could be particularly important as companies fully implement the Sarbanes-Oxley Act, where there is a danger that the costs of compliance across all public companies may far outweigh the potential gains in trying to deter or detect the unethical behavior of a few firms (Lawler and Finegold, 2005).

Building in a feedback loop. To complete the model of the relationship between boards and company performance, it may be useful to include a feedback loop that runs from a broadened definition of performance back to board practices and roles. There are a variety of mechanisms through which this feedback can occur. At the national level, the Sarbanes-Oxley Act and stock exchange reforms can be seen as regulatory responses to the high-profile misdeeds of a few firms that have resulted in new practices and a shift in roles for all public corporations. Trying to affect the dynamics and effectiveness of corporate boards through legislated change is a crude instrument with potentially large unintended consequences as the corporate protests about the major bureaucracy and expense associated with the implementation of Sarbanes-Oxley suggest. As the research we've reviewed suggests, a more targeted, market-based approach at the individual-company level could prove effective, as companies that perform poorly on either financial or legal criteria are more likely to become targets for shareholder activism to change board membership and practices (e.g., Higgs, 2003) and/or potential takeover, two mechanisms that could result in a radical change in the composition and operations of their boards. Other corrective market mechanisms include punitive market valuations and/or, ultimately, firm obsolescence. A final note of caution, however, comes from the work of Westphal and Zajac (1998), who found that adoption of symbolic changes (adopting a long-term incentive plan for managers to appease shareholder activists) may be a management defense to defer pressure to make more substantial changes, including greater outsider representation on board and the separation of the CEO and board chairman roles.

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