

# **The Uncertain Relationship Between Board Composition and Firm Performance**

By Sanjai Bhagat and Bernard Black\*

## ***ABSTRACT***

We survey the evidence on the relationship between board composition and firm performance. Boards of directors of American public companies that have a majority of independent directors behave differently, in a number of ways, than boards without such a majority. Some of these differences appear to increase firm value; others may decrease firm value. Overall, within the range of board compositions present today in large public companies, there is no convincing evidence that greater board independence correlates with greater firm profitability or faster growth. In particular, there is no empirical support for current proposals that firms should have "supermajority-independent boards" with only one or two inside directors. To the contrary, there is some evidence that firms with supermajority-independent boards are less profitable than other firms. This suggests that it may be useful for firms to have a moderate number of inside directors (say three to five on an average-sized eleven member board). We offer some possible explanations for these results, based on board dynamics, the informational advantages possessed by inside (and, often, affiliated) directors, and the value of interaction between different types of directors who bring different strengths to the board.

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# The Uncertain Relationship Between Board Composition and Firm Performance

By Sanjai Bhagat and Bernard Black

## *Introduction*

Over the last 30 years, the boards of directors of large American public companies have changed dramatically. In the 1960s, most had a majority of inside directors; today, almost all have a majority of outside directors and most have a majority of "independent" directors. Many companies have "supermajority" independent boards, with only one or two inside directors. For example, a 1997 survey of 484 of the S&P 500 firms, summarized in Table 1, found that over half (56%) of the surveyed firms had only one or two inside directors (defined broadly as all current and former company officers, even though some researchers consider former officers to be outside directors if several years have passed since they last served as officers). Only nine firms (2%) had a majority of inside directors, and the median firm had over 80% outside directors.

Most commentators applaud the trend toward greater board independence. For example, the National Association of Corporate Directors notes with approval the increasing number of firms whose only inside director is the chief executive officer (CEO), and recommends that boards have a "substantial majority" of independent directors.<sup>1</sup> The Business Roundtable, hardly a fount of innovation in corporate governance, similarly recommends that a "substantial majority" of directors be independent.<sup>2</sup> CalPERS has adopted even more extreme guidelines under which the CEO should be the only inside director on an "ideal" board of directors.<sup>3</sup>

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<sup>1</sup> NATIONAL ASS'N OF CORP. DIRS., REPORT OF THE NACD BLUE RIBBON COMMISSION ON DIRECTOR PROFESSIONALISM 9 (1996).

<sup>2</sup> THE BUS. ROUNDTABLE, STATEMENT ON CORPORATE GOVERNANCE 10 (1997).

<sup>3</sup> See Adam Bryant, *Calpers Draws a Blueprint for its Concept of An Ideal Board*, N.Y. TIMES, June 17, 1997, at D5.

**Table 1A**  
**Number of Inside Directors at S&P 500 Firms**

Number of Inside Directors	Number (Percentage) of Firms
1	111 (23%)
2	159 (33%)
3	113 (23%)
4	58 (12%)
5	25 (5%)
6 or more	18 (4%)

**Table 1B**  
**Percentage of Inside Directors at S&P 500 Firms**

Percentage of Inside Directors	Number (Percentage) of Firms
0 - 10	74 (15%)
11 - 20	182 (38%)
21 - 30	124 (26%)
31 - 40	71 (15%)
41 - 50	24 (5%)
51 - 60	4 (1%)
61+	5 (1%)

**Source:** SpencerStuart, *1997 Board Index: Board Trends and Practices at S&P 500 Corporations*. Totals may not sum to 100% due to rounding.

We survey here the evidence on whether the trend toward greater board independence rests on a sound empirical footing. Many studies document differences in the *behavior* of independent directors and inside directors (or sometimes, differences in the behavior of majority-independent and non-majority-independent boards). However, studies of overall firm performance have found no convincing evidence that firms with majority-independent boards perform better than firms without such boards.

The recent trend toward supermajority-independent boards has entirely outstripped research on whether, whatever the benefits may be from majority-independent boards, there are further benefits from limiting the number of inside directors to one or two. But the limited evidence that we have suggests caution: There is some evidence that having a moderate number of inside directors (say three to five on a typical eleven-member board) correlates with greater profitability.

The weak empirical support for majority- or supermajority-independent boards is mirrored by mixed anecdotal evidence. Independent directors often turn out to be lapdogs rather than watchdogs. The majority-independent board of General Motors did nothing for a decade, while GM floundered, first under Roger Smith and then under Robert Stempel. The majority-independent board of American Express fired former CEO James Robinson only when faced with open shareholder revolt, despite a decade of business problems, with a few scandals along the way--enough so that the business press had dubbed Robinson the "Teflon CEO"--all those problems, and none ever stuck. Many other companies--including IBM, Kodak, Chrysler, Sears, Westinghouse, and Borden--performed abysmally for years despite majority-independent boards. And chief executive compensation exploded over the same period during which independent directors became dominant on large firm boards--a trend that has continued despite the recent trend toward supermajority-independent boards and independent compensation committees.<sup>4</sup>

In this Article, we follow the common practice of dividing directors into *inside directors* (persons who are currently officers of the company), *affiliated outside directors* (former company officers, relatives of company officers, and persons who are likely to have business relationships with the company, including commercial bankers, investment bankers and lawyers) (sometimes called *grey directors*), and *independent directors* (outside directors without such affiliations). We call a board with at least 50% independent directors a *majority-independent board* and a board with only one or two inside directors a *supermajority-independent board*.

We first review the evidence on whether board composition affects the board's behavior *on discrete tasks*, such as firing the CEO, making a takeover bid for another company, or accepting a takeover bid for one's own company. We then survey studies that address whether board composition correlates with *overall firm performance*. Finally, we explore some possible explanations for why firms with majority-independent boards appear not to perform any better than firms without such boards, and why firms with supermajority-independent boards might even perform worse, on average, than other firms.

### ***Board Composition and Discrete Board Tasks***

One general approach to studying the effect of board composition on firm performance involves studying discrete board tasks, such as replacing the CEO, or making or defending against a takeover bid. This approach can provide insight into how different boards behave

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<sup>4</sup> See GRAEF CRYSTAL, IN SEARCH OF EXCESS: THE OVER-COMPENSATION OF AMERICAN EXECUTIVES (1991); VALUE FOR MONEY: EXECUTIVE COMPENSATION IN THE 1990S (Edward Iacobucci with Michael J. Trebilcock eds., 1996).

on particular tasks. It also tends to involve relatively tractable data, which makes it easier for researchers to find statistically significant results. The principal weakness of this approach is that it cannot tell us how board composition affects overall firm performance. Firms with majority-independent boards could perform better on particular tasks, such as replacing the CEO, yet worse on other tasks, leading to no net advantage in overall performance.

A second general approach involves examining directly the correlation between board composition and overall firm performance. By directly examining the "bottom line" of firm performance, this approach avoids the principal weakness of the first approach. But the direct approach raises different problems. Firm performance must be measured over a long period of time, which leads to noisy data. This makes it hard to find statistically significant results, even if a relationship between board composition and firm performance in fact exists. Moreover, if a relationship is found, we are left with the problem of explaining why the relationship exists--what do different boards do differently that leads to differences in performance? Thus, both approaches are needed to provide a full picture of how board composition affects board behavior and firm performance.

In this part, we review the first group of studies that assess how board composition affects how the board completes particular tasks. As will be seen, the overall evidence from these studies on the benefits from greater board independence is rather equivocal. The next part of this Article reviews the evidence on how board composition affects overall firm performance.

### *CEO Replacement*

There is widespread agreement that a central board task is replacing the CEO when necessary.<sup>5</sup> The most careful study of how the decision to fire the CEO correlates with board composition is by Michael Weisbach.<sup>6</sup> He reports that boards with at least 60% independent directors are more likely than other boards to fire a poorly performing CEO.

These additional firings are likely to be value increasing, for several reasons. First, boards are generally slow to fire CEOs. Only very poor performance, for an extended period of time, leads to measurably shorter tenure in office.<sup>7</sup> So faster firings are probably a step in

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<sup>5</sup> Boards also sometimes replace (or urge the CEO to replace) other senior executives, but these decisions are presumably less important than the CEO-replacement decision, and in any event have not been studied empirically.

<sup>6</sup> See Michael S. Weisbach, *Outside Directors and CEO Turnover*, 20 J. FIN. ECON. 431 (1988).

<sup>7</sup> See Jerold B. Warner, Ross L. Watts & Karen H. Wruck, *Stock Prices and Top Management*

the right direction. Event studies of the stock price reaction to a CEO firing provide a possible measure of whether investors believe the firing will increase firm value. But these studies are hard to interpret, because the firing announcement conveys information to investors both about the event (the firing) and about how the firm performed under the former CEO. Nonetheless, a study by Scott and Kleidon that attempts to untangle these signaling effects finds some evidence that investors believe that CEO firings increase firm value on average.<sup>8</sup> There is also evidence that firm performance improves modestly, on average, after a CEO is replaced.<sup>9</sup>

The economic significance of the additional firings by 60%-independent boards is small, however. Weisbach finds that the CEO termination rate for firms that ranked in the bottom decile for stock price (earnings) performance is only 1.3% (6.8%) higher for firms with 60%-independent boards than for firms with 40% or fewer independent directors. Moreover, he finds that for firms with *above average* stock price (earnings) performance, CEO turnover is *lower* if the firm has a 60%-independent board.<sup>10</sup> This suggests that independent directors, who are likely to know less about a firm than inside directors, may be a bit quicker to replace a CEO if observable performance measures (such as stock price and earnings) are poor, but may also act more slowly to replace a bad CEO as long as observable performance measures remain respectable.<sup>11</sup> Consistent with the hypothesis that majority-independent boards are faster (slower) than other boards to fire the CEO if observable performance measures are poor (strong), Scott and Kleidon find that firms with majority-outside boards who replace CEO's have worse pre-replacement stock price performance than firms without majority-outside boards.<sup>12</sup>

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*Changes*, 20 J. FIN. ECON. 461, 487-88 (1988).

<sup>8</sup> See Kenneth E. Scott & Allan W. Kleidon, *CEO Performance, Board Types and Board Performance: A First Cut*, in INSTITUTIONAL INVESTORS AND CORPORATE GOVERNANCE 181 (Theodor Baums et al. eds., 1994).

<sup>9</sup> See David J. Denis & Diane K. Denis, *Performance Changes Following Top Management Dismissals*, 50 J. FIN. 1029, 1055 (1995).

<sup>10</sup> See Weisbach (1988), *supra* note 6, at 440-41.

<sup>11</sup> Weisbach notes this possible interpretation of his results. See *id.* at 454-55. He attempts to address this possibility by studying stock price reaction to firing announcements by companies with and without 60%-independent boards. But his stock price results are generally insignificant, and his analysis of stock price returns ignores signaling effects. Cf. Scott & Kleidon (1994), *supra* note 8, at 195-96.

<sup>12</sup> See Scott & Kleidon (1994), *supra* note 8, at 191, 195.

It is also possible that Weisbach's results are limited to a specific time period. Mikkelson and Partch find no significant correlation between firm performance or board composition and CEO tenure during the low-takeover period of 1989-1993. During the high-takeover period of 1983-1988, they find a correlation between firm performance and CEO tenure, but still no correlation between board composition and CEO tenure.<sup>13</sup> This suggests that the threat of a hostile takeover, created by an active market for corporate control, exerts stronger pressure on a firm to replace a poor CEO than a board with a high proportion of independent directors.

Evidence on the overall rate at which different boards replace the CEO is mixed. Weisbach finds no overall difference based on degree of board independence. But Geddes and Vinod report that firms with a high proportion of outside directors replace CEOs at a higher rate than other firms, after controlling for other factors, such as age, that affect CEO replacement.<sup>14</sup>

Taken as a whole, these studies provide some evidence that independent directors behave *differently* than inside directors when they decide whether to replace the current CEO. But the differences seem rather marginal, and it is not clear whether majority- or supermajority-independent boards make better or worse decisions than other boards, on average.

### *Response to a Takeover Bid*

A second key task for the board of directors is deciding whether and at what price the company should be sold. Cotter, Shivdasani, and Zenner report that tender offer targets with majority-independent board realize roughly 20% higher stock price returns between 1989 and 1992 than targets without majority-independent boards.<sup>15</sup> This suggests that, conditioned on an offer being made, a majority-independent board is better at extracting a high price from an acquiror.

Higher premia are not unequivocally good, however. If both bidder and target are publicly traded, a higher takeover price is simply a wealth transfer from the bidder's shareholders to the target's shareholders. Moreover, if shareholders are diversified, then over a number of transactions, the bidder's shareholders and the target's shareholders *are the same*

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<sup>13</sup> See Wayne H. Mikkelson & M. Megan Partch, *The Decline of Takeovers and Disciplinary Managerial Turnover*, 44 J. FIN. ECON. 205, 223 (1997).

<sup>14</sup> See R. Richard Geddes & Hrishikesh D. Vinod, *CEO Age and Outside Directors: A Hazard Analysis*, 6 REV. INDUS. ORG. 1 (1996).

<sup>15</sup> See James F. Cotter, Anil Shivdasani & Marc Zenner, *Do Independent Directors Enhance Target Shareholder Wealth During Tender Offers?*, 43 J. FIN. ECON. 195 (1997).

people. The key to economic efficiency in the takeover market is not the price paid by the acquirer, but instead: (i) whether there is a good strategic fit between the acquirer and the target (for which a good measure is combined bidder and target returns, not target returns alone); and (ii) whether there is an optimal frequency of takeovers, taking into account both their efficiency benefits and transaction costs.<sup>16</sup>

In the Cotter, Shivdasani, and Zenner study, the higher returns to targets with majority-independent boards come at the expense of lower bidder returns. They find no evidence of higher combined bidder and target returns if the target has a majority-independent board. Thus, one cannot infer from their study that there are greater efficiency gains if the target has a majority-independent board. Moreover, in a "rational expectations" equilibrium, acquirers will realize that targets with majority-independent boards will extract higher takeover premia, and will make fewer takeover bids for firms with majority-independent boards. This will reduce the overall efficiency gains from takeovers. Even if we look only at the target's side of the ledger, and not the bidder's side, shareholders of *potential* target firms may not benefit from majority-independent boards, even if shareholders of *actual* targets realize higher returns if the targets have such boards.

There is some evidence in the Cotter, Shivdasani, and Zenner study to support our conjecture that bidders make fewer bids for targets with majority-independent boards. The target firms in their sample had, on average, only 36% independent directors--far lower than the 60% or so independent directors found in other contemporaneous studies.<sup>17</sup> This could reflect the smaller size of takeover targets, compared to the large firms that other researchers on boards of directors have studied. But it could also reflect bidders avoiding targets with a high proportion of independent directors.

Lee, Rosenstein, Rangan, and Davidson study management buyouts--a transaction form where monitoring by independent directors is especially likely to have value because inside directors have a conflict of interest. They find that shareholders receive higher premia in

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<sup>16</sup> The issue of the proper role of the target's board of directors when a takeover bid has been made is a difficult one that has spawned an extended debate among a number of legal academics, including Lucian Bebchuk, Ron Gilson, Frank Easterbrook, Dan Fischel, and Alan Schwartz. For cites to the original papers and an overview of the debate by two of the participants, see FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 185-90 (1991).

<sup>17</sup> Compare Cotter, Shivdasani & Zenner (1997), *supra* note 15, at 203, with SANJAI BHAGAT & BERNARD BLACK, *BOARD INDEPENDENCE AND LONG-TERM FIRM PERFORMANCE?* (Working Paper, 1998), *available in Social Science Research Network Electronic Library*, <[http://papers.ssrn.com/paper.taf?abstract\\_id=133808](http://papers.ssrn.com/paper.taf?abstract_id=133808)> April Klein, *Firm Performance and Board Committee Structure*, 41 J.L. & ECON. 275, 283 (1998), and David Yermack, *Higher Market Valuation of Companies with a Small Board of Directors*, 40 J. FIN. ECON. 185, 191 (1996).



management buyouts if the firm has a majority-independent board.<sup>18</sup> This effect is not observed for divisional buyouts, where the inside directors of the parent company have an incentive to sell the division at an arm's-length price. Here, public shareholders own shares only in the target, not the bidder, so there are wealth transfer implications from the higher premia (albeit still no clear efficiency implications). But here too, higher premia in the buyouts that take place may not benefit shareholders of potential target firms as a class, because they could lead to fewer management buyouts, and thus lower total gains for a portfolio of firms.

Anil Shivdasani uses the number of other directorships held by a company's outside directors as a proxy for director quality.<sup>19</sup> Companies with high-quality directors are less likely to become takeover targets. For Shivdasani, this suggests that they are better run, which could be because they have better directors.<sup>20</sup> This is possible, but to us, it seems at least as likely that people whose services as directors are in high demand choose to serve on the boards of already well-run companies.

Kini, Kracaw, and Mian report that *after* a takeover of a company with a board dominated by inside (independent) directors, the proportion of independent directors increases (decreases); this effect is stronger for targets whose CEO is also replaced.<sup>21</sup> This suggests that board composition tends to regress to the mean, with the takeover prompting the acquiror to reexamine the target's board composition. If these post-takeover changes in board composition are value increasing, this suggests that firms can have boards with either too many or too few independent directors.

Taken as a whole, the studies of the role of the target company's board in an acquisition provide evidence that majority-independent boards extract higher prices from bidders. But they do not enable us to conclude that majority-independent boards produce better outcomes for shareholders of potential target firms, let alone better outcomes for the more relevant group--all public shareholders (including the bidder's shareholders).

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<sup>18</sup> See Chun I. Lee, Stuart Rosenstein, Nanda Rangan & Wallace N. Davidson III, *Board Composition and Shareholder Wealth: The Case of Management Buyouts*, FIN. MGMT., Spring 1992, at 58, 65-68.

<sup>19</sup> See Anil Shivdasani, *Board Composition, Ownership Structure, and Hostile Takeovers*, 16 J. ACCT. & ECON. 167 (1993).

<sup>20</sup> See *id.* at 168.

<sup>21</sup> See Omesh Kini, William Kracaw & Shehzad Mian, *Corporate Takeovers, Firm Performance, and Board Composition*, 1 J. CORP. FIN. 383 (1995).

## *Acquiring Another Company*

A third important role for the board of directors is approving (or not) major investment decisions. The board's role in making investment decisions is difficult to study, because many decisions are not publicly announced. The decision to acquire another firm is an exception. Public disclosure is required by the securities laws if the target firm is publicly traded or the acquisition is material for the acquiring firm. The stock price reaction to the announcement provides a measure of whether shareholders think the acquirer has gotten a bargain or has overpaid.

Byrd and Hickman report that tender offer bidders with majority-independent boards earn roughly zero stock price returns on average, while bidders without such boards suffer statistically significant losses of 1.8% on average.<sup>22</sup> This appears to be because bidders with majority-independent boards offer lower takeover premia.<sup>23</sup> You, Caves, Smith, and Henry also report a significant negative correlation between proportion of inside directors and bidder stock price returns.<sup>24</sup> These studies suggest that independent directors may play a valuable monitoring role in restraining the CEO's tendency to build a corporate empire, even at the cost of overpaying to buy another company. However, Brown and Maloney fail to find a significant difference in board composition between firms that made good acquisitions of other firms (measured by stock price reaction) and firms that make bad acquisitions (measured by a combination of negative stock price reaction to the bid and a subsequent bid to acquire the firm).<sup>25</sup> And Subrahmanyam, Rangan, and Rosenstein find the opposite tendency for bank acquisitions--a high proportion of outside directors predicts lower stock price returns for the acquiring bank.<sup>26</sup>

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<sup>22</sup> See John W. Byrd & Kent A. Hickman, *Do Outside Directors Monitor Managers?: Evidence from Tender Offer Bids*, 32 J. FIN. ECON. 195, 207 (1992).

<sup>23</sup> See *id.* at 203-04.

<sup>24</sup> See Victor You, Richard Caves, Michael Smith & James Henry, *Mergers and Bidders' Wealth: Managerial and Strategic Factors*, in *THE ECONOMICS OF STRATEGIC PLANNING: ESSAYS IN HONOR OF JOEL DEAN 201*, 217 (Lacy Glenn Thomas, III ed., 1986).

<sup>25</sup> See WILLIAM O. BROWN & MICHAEL T. MALONEY, *EXIT, VOICE, AND THE ROLE OF CORPORATE DIRECTORS: EVIDENCE FROM ACQUISITION PERFORMANCE* (Working Paper, 1998). On the correlation between a firm making a poor acquisition and a subsequent takeover bid for the firm, see Mark Mitchell & Kenneth Lehn, *Do Bad Bidders Become Good Targets?*, 98 J. POL. ECON. 372 (1990).

<sup>26</sup> See Vijaya Subrahmanyam, Nanda Rangan & Stuart Rosenstein, *The Role of Outside Directors in Bank Acquisitions*, FIN. MGMT., Autumn 1997, at 23.

The economic significance of the lower takeover premia that Byrd and Hickman find for bidders with majority-independent boards (assuming these results are correct, despite the contrary evidence reported by Brown and Maloney and by Subrahmanyam, Rangan, and Rosenstein) is small. Only a minority of firms are active acquirers, and the improvement in returns to these firms is modest.

### *Takeover Defenses*

Takeover defenses, such as poison pills, can be used to extract a higher price from a takeover bidder, but can be also used to fend off a value-increasing takeover bid entirely. There is conflicting evidence on whether shareholders believe that a majority-independent board is more likely to use these defenses in a pro-shareholder manner. Brickley, Coles, and Terry report that when firms adopt poison pill defenses, the stock market reaction is significantly positive if the firm has a majority-independent board, and significantly negative if it does not.<sup>27</sup> Similarly, McWilliams, and Sen find a roughly zero stock price reaction to adoption of antitakeover amendments by firms with majority independent boards, compared to a significant negative stock price reaction for other firms.<sup>28</sup> But Sundaramurthy, Mahoney, and Mahoney find the opposite result: a higher proportion of outside directors predicts a more negative stock market reaction to adoption of poison pills and other takeover defenses.<sup>29</sup>

Bacon, Cornett, and Davidson find that stock price reaction to a dual-class recapitalization (an extreme defensive measure that makes the firm essentially immune from a hostile takeover) is negative for firms with majority-independent boards, and positive for firms without such boards (the difference in means is statistically significant).<sup>30</sup> This could reflect signaling--investors may be surprised that a majority-independent board adopts a dual-class recapitalization--and thus only weakly supports an inference that dual-class recapitalizations adopted by firms with majority-independent boards are worse for shareholders than other dual-class recapitalizations. However, the negative stock price returns for dual-class recapitalizations by firms with majority-independent boards are in

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<sup>27</sup> See James A. Brickley, Jeffrey L. Coles & Rory L. Terry, *Outside Directors and the Adoption of Poison Pills*, 35 J. FIN. ECON. 371 (1994).

<sup>28</sup> See Victoria B. McWilliams & Nilanjan Sen, *Board Monitoring and Antitakeover Amendments*, 32 J. FIN. & QUANTITATIVE ANALYSIS 491, 497-98 (1997).

<sup>29</sup> See Chamu Sundaramurthy, James M. Mahoney & Joseph T. Mahoney, *Board Structure, Antitakeover Provisions, and Stockholder Wealth*, 18 STRATEGIC MGMT. J. 231, 237-39 (1997).

<sup>30</sup> See Curtis J. Bacon, Marcia Millon Cornett & Wallace N. Davidson III, *The Board of Directors and Dual-Class Recapitalizations*, FIN. MGMT., Autumn 1997, at 5, 14.

tension with the hypothesis that these firms' majority-independent boards have acted to protect shareholder interests.

With regard to how likely different boards are to adopt takeover defenses, Mallette and Fowler find no significant correlation between proportion of independent directors and the likelihood that a firm will adopt a poison pill.<sup>31</sup> Similarly, Wahal, Wiles, and Zenner find no significant difference in board composition between firms that did and did not opt out of Pennsylvania's strict antitakeover laws,<sup>32</sup> and Sundaramurthy, Rechner, and Wang find no significant correlation between board composition and the likelihood that a firm has a staggered board defense.<sup>33</sup>

With regard to a takeover defense that shareholders find particularly obnoxious, payment of "greenmail" to a potential bidder to persuade the bidder to go away, Rita Kosnik reports that firms with a high proportion of outside directors are more likely to pay greenmail, after controlling for management stock ownership.<sup>34</sup>

Taking this group of studies as a whole, there is little evidence that relatively independent boards behave in a significantly more (or less) shareholder-friendlier fashion than other boards when they adopt and employ takeover defenses.

### *Executive Compensation*

One job that the board of directors must undertake--with fewer dollars at stake than some other tasks, but with symbolic importance and perhaps implications for the social acceptability of the large corporation as an organizational form--is establishing compensation for the CEO and other senior executives. A popular prescription, in addition to a highly independent overall board, is a compensation committee composed entirely of independent

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<sup>31</sup> See Paul Mallette & Karen L. Fowler, *Effects of Board Composition and Stock Ownership on the Adoption of "Poison Pills,"* 35 ACAD. MGMT. J. 1010, 1023 (1992).

<sup>32</sup> See Sunil Wahal, Kenneth W. Wiles & Marc Zenner, *Who Opts Out of State Antitakeover Protection?: The Case of Pennsylvania's SB 1310,* FIN. MGMT., Autumn 1995, at 22, 26-27.

<sup>33</sup> See Chamu Sundaramurthy, Paula Rechner, and Weiren Wang, *Governance Antecedents of Board Entrenchment: The Case of Classified Board Provisions,* 22 J. MGMT. 783 (1996).

<sup>34</sup> Rita D. Kosnik, *Effects of Board Demography and Directors' Incentives on Corporate Greenmail Decisions,* 33 ACAD. MGMT. J. 129 (1990). This study is a reexamination of an earlier work, in which the author reported the opposite result--an inverse correlation between proportion of outside directors and propensity to pay greenmail--but only for firms with low CEO ownership. See Rita D. Kosnik, *Greenmail: A Study of Board Performance in Corporate Governance,* 32 ADMIN. SCI. Q. 163 (1987).

directors. Taking the evidence as a whole, however, there is little evidence that independent directors do a better job than inside directors in establishing CEO pay.

Several studies report that the higher the proportion of independent directors on the board, the more the CEO is paid.<sup>35</sup> Moreover, Core, Holthausen, and Larcker find that the component of CEO compensation that is predicted by board composition correlates *negatively* with future performance.<sup>36</sup> This suggests that independent directors are not doing a very good job of developing incentive compensation plans that will induce better performance. This could be because many independent directors are current or former CEOs, who are prone to compensate the CEO in the manner that they would like to be (and often are) compensated themselves. Conyon and Peck find no correlation between CEO compensation in the United Kingdom and board composition, but they are not able to study stock option compensation because disclosure of this data is not required in the U.K.<sup>37</sup>

There is evidence that the board's generosity to the CEO filters down. Pay for executives other than the CEO is also higher at firms with a high percentage of outside directors.<sup>38</sup>

Turning from the board as a whole to the compensation committee, Catherine Daily and coauthors find no evidence of a correlation between proportion of independent directors on the compensation committee and CEO pay.<sup>39</sup> However, David Yermack finds evidence that greater independence of the compensation committee reduces the tendency for companies to award stock options (with exercise price equal to current market value) shortly before the

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<sup>35</sup> See John E. Core, Robert W. Holthausen & David F. Larcker, *Corporate Governance, CEO Compensation, and Firm Performance*, 51 J. FIN. ECON. (forthcoming Mar. 1999); RICHARD CYERT, SOK-HYON KANG, PRAVEEN KUMAR & ANISH SHAH, CORPORATE GOVERNANCE, OWNERSHIP STRUCTURE, AND CEO COMPENSATION (Working Paper, 1997); see also Brian K. Boyd, *Board Control and CEO Compensation*, 15 STRATEGIC MGMT. J. 335, 340 (1994) (finding a negative correlation between proportion of inside directors and CEO compensation).

<sup>36</sup> Core, Holthausen & Larcker (1999), *supra* note 35.

<sup>37</sup> See Martin J. Conyon & Simon I. Peck, *Board Control, Remuneration Committees, and Top Management Compensation*, 41 ACAD. MGMT. J. 146, 153-54 (1998).

<sup>38</sup> See Richard A. Lambert, David F. Larcker & Keith Weigelt, *The Structure of Organizational Incentives*, 38 ADMIN. SCI. Q. 438, 455 (1993).

<sup>39</sup> See Catherine M. Daily, Jonathan L. Johnson, Alan E. Ellstrand & Dan R. Dalton, *Compensation Committee Composition as a Determinant of CEO Compensation*, 41 ACAD. MGMT. J. 209, 214-16 (1996a).

company's stock price increases, thus delivering an immediate paper profit to the option recipients.<sup>40</sup>

A study of the banking industry by Brickley and James, at a time when some states essentially prohibited bank takeovers, reports that banks that were protected against takeover spent more on salaries (suggesting inefficiency and managerial consumption of perquisites), but that for these banks, proportion of outside directors correlated negatively with salary expenditures, suggesting that outside directors helped to control excessive salary expenditures. However, they found no effect of board composition on salary expenditures for banks in states that allowed bank acquisitions.<sup>41</sup>

The proportion of independent directors correlates with the likelihood that a firm will adopt a golden parachute plan to protect its senior executives if the company is acquired.<sup>42</sup> There is some evidence that these plans reduce the likelihood that the senior executives will induce the company to oppose a takeover bid.<sup>43</sup> Thus, they may be value-enhancing if the payout is a small fraction of company value. This is usually but not always the case.<sup>44</sup> Stock price returns to announcement of a golden parachute plan are generally insignificant, and do not depend on overall board composition, but there is some evidence of a more favorable shareholder reaction to parachute announcements by firms with independent compensation committees.<sup>45</sup>

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<sup>40</sup> See David Yermack, *Good Timing: CEO Stock Option Awards and Company News Announcements*, 52 J. FIN. 449, 459-62 (1997).

<sup>41</sup> See James A. Brickley & Christopher M. James, *The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking*, 30 J.L. & ECON. 161, 174-79 (1987).

<sup>42</sup> See Philip L. Cochran, Robert A. Wood & Thomas B. Jones, *The Composition of Boards of Directors and Incidence of Golden Parachutes*, 28 ACAD. MGMT. J. 664, 667 (1985); Harbir Singh & Farid Harianto, *Management-Board Relationships, Takeover Risk and the Adoption of Golden Parachutes*, 32 ACAD. MGMT. J. 7, 20 (1989).

<sup>43</sup> See Judith C. Machlin, Hyuk Choe & James A. Miles, *The Effects of Golden Parachutes on Takeover Activity*, 36 J.L. & ECON. 861 (1993).

<sup>44</sup> See Richard A. Lambert & David F. Larcker, *Golden Parachutes, Executive Decision-Making, and Shareholder Wealth*, 7 J. ACCT. & ECON. 179 (1985).

<sup>45</sup> See Wallace N. Davidson III, Theodore Pilger & Andrew Szakmary, *Golden Parachutes, Board and Committee Composition, and Shareholder Wealth*, 33 FIN. REV. 17 (1998).

## *Firm Failure*

One might expect that monitoring by independent directors is more important for poorly run than for well run firms. One test of that hypothesis is whether firms with highly independent boards are less likely to suffer such severe financial distress that they end up in bankruptcy. Chaganti, Mahajan, and Sharma compare 21 matched pairs of firms that failed between 1970 and 1976 and matched nonfailed firms.<sup>46</sup> They find no significant difference in board composition between failed and nonfailed firms, and no significant tendency for failed firms to increase their proportion of outside directors in the five years before failure.<sup>47</sup> However, Daily and Dalton find a correlation between the number of *affiliated* directors and the likelihood of future bankruptcy.<sup>48</sup>

## *Financial Fraud and Reporting*

One role that independent directors can play is to oversee the honesty of a firm's financial reporting. The rules of both the New York Stock Exchange and NASDAQ require listed firms to have an audit committee, composed mostly or exclusively of independent directors, that is directly charged with this role.<sup>49</sup> Dechow, Sloan, and Sweeney report that firms with a majority of inside directors and without an audit committee are more likely to commit financial fraud, compared to a control sample matched by industry and size.<sup>50</sup> Similarly, Mark Beasley finds that firms that commit fraud have fewer independent directors than matched control firms that did not commit fraud (he does not find evidence that the presence or absence of an audit committee, or its composition, affects fraud incidence).<sup>51</sup> These studies suggest that independent directors help to control financial fraud, but it is also possible that managers who are prone to commit fraud resist oversight by independent boards, so that

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<sup>46</sup> See Rajeswararao S. Chaganti, Vijay Mahajan & Subhashi Sharma, *Corporate Board Size, Composition and Corporate Failures in Retailing Industry*, 22 J. MGMT. STUD. 400, 408 (1985).

<sup>47</sup> See *id.* at 413.

<sup>48</sup> Catherine M. Daily & Dan R. Dalton, *Bankruptcy and Corporate Governance: The Impact of Board Composition and Structure*, 37 ACAD. MGMT. J. 1603, 1613 (1994).

<sup>49</sup> For a recent discussion of the audit committee's role and proposals for increasing its independence from management, see REPORT AND RECOMMENDATIONS OF THE BLUE RIBBON COMMITTEE ON IMPROVING THE EFFECTIVENESS OF CORPORATE AUDIT COMMITTEES (1999), *reprinted in* 54 BUS. LAW. 1067 (1999).

<sup>50</sup> Patricia M. Dechow, Richard G. Sloan & Amy P. Sweeney, *Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC*, 13 CONTEMP. ACCT. RES. 1, 21, 30 (1996).

<sup>51</sup> See Mark S. Beasley, *An Empirical Analysis of the Relation Between the Board of Director [sic] Composition and Financial Statement Fraud*, 71 ACCT. REV. 443, 455-56 (1996).

manager fraud propensity drives both the likelihood of fraud and the degree of board independence.<sup>52</sup>

Turning from financial fraud to general financial reporting, David Wright finds no evidence that board composition affects the overall quality of financial reporting by U.S. firms.<sup>53</sup> However, Peasnell, Pope, and Young find for U.K. firms that firms with a high proportion of outside directors adopt fewer income-increasing accrual accounting strategies than other firms.<sup>54</sup>

### *Diversification*

Diversified firms trade at substantially lower prices than the sum of the likely values of their individual lines of business, valued as stand-alone firms. Ronald Anderson and coauthors investigate whether the degree of diversification, or the decision to increase or decrease firm-level diversification, is related to board composition.<sup>55</sup> They find that diversified firms have a higher percentage of independent directors, but no clear evidence on whether these firms become more diversified because they have more independent directors, or add more independent directors because they are diversified. There is a weak tendency for firms that become less diversified between 1985 and 1994 to have a higher proportion of independent directors than firms that become more diversified (suggesting that board composition is a result of diversification rather than a cause), but the differences in board composition are not statistically significant.

### *Research and Development*

Baysinger, Kosnik, and Turk report a positive correlation between percentage of *inside* directors and research and development (R&D) spending per employee.<sup>56</sup> But even if board

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<sup>52</sup> Beasley uses control variables that attempt to control for the CEO's dominance, but still recognizes this potential limitation of his study. See *id.* at 450-51 & n.6.

<sup>53</sup> DAVID W. WRIGHT, EVIDENCE ON THE RELATION BETWEEN CORPORATE GOVERNANCE CHARACTERISTICS AND THE QUALITY OF FINANCIAL REPORTING (Working Paper, 1996).

<sup>54</sup> K.V. PEASNELL, P.F. POPE & S. YOUNG, OUTSIDE DIRECTORS, BOARD EFFECTIVENESS AND EARNINGS MANAGEMENT (Working Paper, 1998), *available in* Social Science Research Network Electronic Library, <[http://papers.ssrn.com/paper.taf?abstract\\_id=125348](http://papers.ssrn.com/paper.taf?abstract_id=125348)>.

<sup>55</sup> RONALD C. ANDERSON, THOMAS W. BATES, JOHN M. BIZJAK & MICHAEL L. LEMMON, CORPORATE GOVERNANCE AND FIRM DIVERSIFICATION (Working Paper, 1998), *available in* Social Science Research Network Electronic Library, <[http://papers.ssrn.com/paper.taf?abstract\\_id=121013](http://papers.ssrn.com/paper.taf?abstract_id=121013)>.

<sup>56</sup> See Barry D. Baysinger, Rita D. Kosnik & Thomas A. Turk, *Effects of Board and Ownership*



composition were a cause of differences in R&D spending, rather than an effect of whatever made the company R&D intensive, there would be no clear performance implications from this result.

### *Factors Affecting Changes in Board Composition*

An important question in evaluating how board composition affects firm performance is the extent to which board composition is endogenously related to performance. For example, one might hypothesize generally that firms tend to develop board structures that are optimal for their circumstances.<sup>57</sup> One might hypothesize more specifically that mature firms have a greater need for independent directors, to control conflicts between managers and shareholders over free cash flow that cannot be profitably reinvested in the firm's core business, and appoint a higher proportion of independent directors to fill that need.

An endogenous relationship between board independence and firm profitability or growth, if it exists, also raises difficult empirical questions about how to assess the effect of board composition on other endogenously determined variables, such as firm performance. Ordinary least squares analysis is no longer satisfactory, because it will produce biased coefficient estimates. But simultaneous equations techniques that attempt to correct for this problem, such as second-order and third-order least squares, produce results that are no more (and perhaps less) reliable than ordinary least squares, because they are highly sensitive to the specific model that is tested.<sup>58</sup>

There is, however, little evidence that board composition is sensitive to a firm's past growth or profitability. For example, Bhagat and Black examine whether the *change* between 1988 and 1991 in the degree of board independence (INDEP = fraction of independent directors – fraction of inside directors) correlates with the firm's profitability or growth rate during 1988-1991 (a contemporaneous relationship) or during 1985-1987 (a lagged relationship).<sup>59</sup> If firms respond to slow growth (low profitability) by increasing the independence of their boards, then there should be a negative correlation between change in

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*Structure on Corporate R&D Strategy*, 34 ACAD. MGMT. J. 205, 209 (1991).

<sup>57</sup> See Eugene F. Fama & Michael C. Jensen, *Separation of Ownership and Control*, 26 J.L. & ECON. 301, 313-15 (1983).

<sup>58</sup> For a study that explores the sensitivity of simultaneous equations techniques to model specification in board composition studies, see Scott W. Barnhart & Stuart Rosenstein, *Board Composition, Managerial Ownership, and Firm Performance: An Empirical Analysis*, 33 FIN. REV. 1 (1998).

<sup>59</sup> BHAGAT & BLACK (1998), *supra* note 17, tbl. 7.

board independence and firm growth (profitability). Bhagat and Black find no such correlation. These results are reported in Table 2.

**Table 2**  
**Correlation Between Change in Board Independence and Firm Profitability or Growth**

Change in board independence for 205 large U.S. public companies between early 1988 and early 1991. Board composition data is from early 1988 and early 1991. Sample size varies from 195 to 201 because of missing data. *t*-statistics are shown in parentheses. Significant results ( $p < .05$ ) are in **boldface**.

Dependent Variable	Independent Variables (controls for industry, board size, and firm size (measured by log(1987 sales)) are included in the regressions but are not shown)			Adj. R <sup>2</sup>
	Profitability or Growth Variable	Recent Past Performance or Growth (Same Variable over 1985-1987)	Contemporaneous Performance or Growth (Same Variable over 1988-1990)	
$\delta$ INDEP = INDEP 91 - INDEP 88	<i>Profitability Variables</i>			
	Tobin's <i>q</i>	-0.02 (-.70)	-.01 (-.20)	-.021
	return on assets (operating income/assets)	.10 (.31)	-.18 (-.52)	-.032
	turnover ratio (sales/assets)	-.09 (-1.14)	.17 (1.93)	.005
	operating margin (operating income/sales)	-.18 (-.80)	-.12 (-.54)	.001
	sales per employee	<b>.001 (2.08)</b>	-.001 (-1.57)	-.004
	market-adjusted stock price returns	-.03 (-.97)	-.01 (-.35)	-.021
	<i>Growth Variables (percentage growth from 1988 to 1991)</i>			
	assets	-.001 (-.24)	-.001 (-.12)	-.028
	sales	-.001 (-.33)	-.001 (-1.00)	-.022
	operating income	-.001 (-.23)	.001 (.31)	-.031
	employees	-.001 (-.17)	-.001 (-.01)	-.032
	cash flow (operating income plus depreciation and amortization)	-.001 (1.04)	-.001 (-.87)	-.022

In Table 2, the signs on the coefficients for both contemporaneous and past performance vary and most *t*-statistics are small. The only significant result (for sales per employee for 1985-1987) and the only marginally significant result (for turnover ratio for 1988-1990) have the *opposite* sign from that predicted, and both coefficients have the opposite sign for the other studied period. Adjusted R<sup>2</sup> values are trivial and often negative.

Other researchers who have examined the response of board composition to performance have also found weak and varying results. Hermalin and Weisbach, and Weisbach (in a separate paper) report that the proportion of independent directors on large firm boards increases slightly when a company has performed poorly: firms in the bottom performance decile in year  $X$  increase their proportion of independent directors by around 1% in year  $X+1$ , relative to other firms, during 1972-1983.<sup>60</sup> However, April Klein finds no tendency for firms in the bottom quintile for 1991 stock price returns to add more independent directors in 1992 and 1993 than firms in the top quintile.<sup>61</sup> And Denis and Sarin report that firms that substantially increase their proportion of independent directors had *above-average* stock price returns in the previous year.<sup>62</sup>

If board independence does not vary very much, if at all, based on past performance or growth rate, what does it depend on? Denis and Sarin provide some answers to this question. They report that board composition tends to regress to the mean, with firms with a high (low) proportion of independent directors reducing (increasing) this percentage over time. Individual firms sometimes undergo large changes in board composition in a single year, often related to the emergence of a result of a new major shareholder. But these changes usually do not affect whether a board has a majority of independent directors.<sup>63</sup> Denis and Sarin's evidence of mean regression in board composition is consistent with a similar finding by Kini, Kracaw, and Mian for changes in board composition following a takeover.<sup>64</sup>

There is also evidence that board composition responds to the firm's regulatory environment. An early study by Jeffrey Pfeffer finds that highly regulated firms have fewer inside directors and more lawyers on their boards.<sup>65</sup> Agrawal and Knoeber find that firms whose business is sensitive to political decisions (proxied either by the percentage of sales to the government or by the presence of a public relations office in Washington, D.C.) have more independent directors with political backgrounds, and firms with high pollution control

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<sup>60</sup> See Benjamin E. Hermalin & Michael S. Weisbach, *The Determinants of Board Composition*, 19 RAND J. ECON. 589 (1988); Weisbach (1988), *supra* note 6, at 454.

<sup>61</sup> April Klein, *An Empirical Analysis of the Relation Between Board of Directors' Composition, Firm Performance, and the Degree of CEO Domination over the Board of Directors* (Working Paper, 1999).

<sup>62</sup> David J. Denis & Atulya Sarin, *Ownership and Board Structures in Publicly Traded Corporations*, 52 J. FIN. ECON. (forthcoming May 1999).

<sup>63</sup> Denis & Sarin (1999), *supra* note 62.

<sup>64</sup> Kini, Kracaw & Mian, *supra* note 21.

<sup>65</sup> See Jeffrey Pfeffer, *Size and Composition of Corporate Boards of Directors: The Organization and Its Environment*, 17 ADMIN. SCI. Q. 218, 224 (1972).

expenditures have more lawyers on their boards.<sup>66</sup> Ronald Anderson and coauthors report that diversified firms (with more than one major business segment) have a higher degree of board independence than singleline firms.<sup>67</sup> April Klein finds evidence that firms add affiliated directors to their boards in contexts where it could make sense to do so.<sup>68</sup> On the other hand, Holderness and Sheehan find no evidence that firms with majority shareholders, which might have greater need for an independent board as a counterweight to the power of the majority shareholder, adopt more independent boards than other firms.<sup>69</sup>

Turning to studies of particular industries, Mayers, Shivdasani, and Smith report that mutual insurance companies, which have weaker control mechanisms other than the board of directors, have a higher proportion of independent directors than stock insurance companies, and that insurance companies that change from mutual to stock ownership reduce their proportion of independent directors.<sup>70</sup> This suggests that firms adapt their boards to major change in organizational structure. However, Kole and Lehn report various changes in corporate governance mechanisms in the airline industry after deregulation, but no change in the proportion of independent directors on airline boards.<sup>71</sup> And Brickley and James report that banks in states that restrict acquisitions of banks (so that banks have weaker takeover market discipline) have fewer outside directors than banks in states that allow these acquisitions.<sup>72</sup> This is the opposite of what one might expect if the takeover market and outside director oversight are substitute control mechanisms.

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<sup>66</sup> ANUP AGRAWAL & CHARLES R. KNOEBER, OUTSIDE DIRECTORS, POLITICS, AND FIRM PERFORMANCE (Working Paper, 1999), available in Social Science Research Network Electronic Library, [http://papers.ssrn.com/paper.taf?abstract\\_id=125348](http://papers.ssrn.com/paper.taf?abstract_id=125348).

<sup>67</sup> Anderson, Bates, Bizjak & Lemmon (1998), *supra* note 55.

<sup>68</sup> Klein (1998), *supra* note 17.

<sup>69</sup> See CLIFFORD G. HOLDERNESS & DENNIS P. SHEEHAN, CONSTRAINTS ON LARGE-BLOCK SHAREHOLDERS (National Bureau of Econ. Research Working Paper No. 6765, 1998).

<sup>70</sup> See David Mayers, Anil Shivdasani & Clifford W. Smith, Jr., *Board Composition and Corporate Control: Evidence from the Insurance Industry*, 70 J. BUS. 33, 35 (1997).

<sup>71</sup> Stacey R. Kole & Kenneth Lehn, *Deregulation and the Adaptation of Governance Structure: The Case of the U.S. Airline Industry* 52 J. FIN. ECON. (forthcoming 1999).

<sup>72</sup> See James A. Brickley & Christopher M. James, *The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking*, 30 J.L. & ECON. 161, 169-72 (1987).

## *Evidence (or Lack Thereof) on Supermajority - Independent Boards*

A number of the studies cited above find differences in behavior between firms with majority-independent boards (in Weisbach's study, 60% independent boards<sup>73</sup>) and firms without such boards. A modeling effort by Noe and Rebello suggests (not too surprisingly) that boards with a majority of independent directors may behave differently than boards without such a majority.<sup>74</sup> Hermalin and Weisbach develop a model in which CEO independence is a continuously decreasing function of the proportion of independent directors.<sup>75</sup>

However, none of the studies reviewed above investigate whether a *supermajority-independent* board, with only one or two inside directors, behaves differently than a merely *majority-independent* board. The theoretical case for such a high degree of independence affecting the board's monitoring ability is unclear. Thus, even if the evidence on benefits from a majority-independent board were clear (as the review above suggests, the evidence is not clear), there would still be a question as to whether, if a majority-independent board is good, a supermajority-independent board is even better.

## *The Role of Share Ownership*

Numerous studies examine the correlation between share ownership and company performance.<sup>76</sup> Some studies find evidence that inside stock ownership correlates with improved performance up to a modest level of ownership (perhaps as low as 5%), but others do not. There is mixed evidence about the correlation between inside ownership and performance at ownership levels above 5%, and also some evidence that CEO stock

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<sup>73</sup> See Weisbach (1988), *supra* note 6, at 436.

<sup>74</sup> THOMAS H. NOE & MICHAEL J. REBELLO, THE DESIGN OF CORPORATE BOARDS: COMPOSITION, COMPENSATION, FACTIONS AND TURNOVER (Georgia State Univ. Dep't Working Paper No. 96-01, 1996).

<sup>75</sup> See Benjamin E. Hermalin & Michael S. Weisbach, *Endogenously Chosen Boards of Directors and their Monitoring of the CEO*, 88 AM. ECON. REV. 96 (1998).

<sup>76</sup> For surveys, see COUNCIL OF INSTITUTIONAL INVESTORS, DOES OWNERSHIP ADD VALUE?: A COLLECTION OF 100 EMPIRICAL STUDIES (1994); Bernard S. Black, *The Value of Institutional Investor Monitoring: The Empirical Evidence*, 39 UCLA L. REV. 895 (1992); Charles P. Himmelberg, R. Glenn Hubbard & Darius Palia, *Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance*, \_\_ J. FIN. ECON. (forthcoming 1999); Frank Lichtenberg & Darius Palia, *Managerial Ownership and Firm Performance: A Re-Examination Using Productivity Measurement*, \_\_ J. CORP. FIN. (forthcoming 1999); Claudio Loderer & Kenneth Martin, *Executive Stock Ownership and Performance: Tracking Faint Traces*, 45 J. FIN. ECON. 223 (1997).

ownership may serve more as a reward for past performance than as an incentive that boosts future performance.<sup>77</sup>

The possible correlation between inside ownership and firm performance means that studies of whether board composition affects performance must control for inside stock ownership. Firms with high inside ownership tend to have fewer independent directors,<sup>78</sup> partly because large inside shareholders want their own representatives on the board, which leaves fewer seats for others.

Large outside shareholders also sometimes insist on representation on a company's board of directors. If companies with large outside shareholders perform better due to monitoring by the outside shareholders, then a study that does not control for the presence of large shareholders might mistakenly ascribe this correlation to the presence of independent directors. Yet many studies of the role of directors do not control for stock ownership.

### *Limitations of Studies of Discrete Board Tasks*

Studies that focus on only *one* directorial task have an inherent limitation. Any one study tells us relatively little about how board composition affects overall firm performance. One problem is that there are important board tasks that are difficult to study empirically. Consider, for example, the decision to choose the firm's new CEO. This is a critical decision that must be undertaken periodically by all firms, both in the unusual case where the old CEO is fired and in the normal case where the old CEO retires or leaves voluntarily. Yet there is no easy way to study whether board composition affects the board's skill at this task.

It is plausible that a majority- or supermajority-independent board could be better at monitoring tasks, yet worse at the task of picking the new CEO, which depends less on independence than on close knowledge of the business and the skills of the leading candidates, who will usually include the company's current senior executives. If so, this negative effect of board independence, which would occur at *all* companies, could easily swamp whatever positive benefits the firm might get from the superior monitoring that a majority- or supermajority-independent board might provide.

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<sup>77</sup> See Stacey R. Kole, *Managerial Ownership and Firm Performance: Incentives or Rewards?*, 2 ADVANCES IN ECON. 119 (1996).

<sup>78</sup> See, e.g., Denis & Sarin (1999), *supra* note 62; Benjamin E. Hermalin & Michael S. Weisbach, *The Effects of Board Composition and Direct Incentives on Firm Performance*, FIN. MGMT., Winter 1991, at 101, 103; Kenneth J. Rediker & Anju Seth, *Boards of Directors and Substitution Effects of Alternative Governance Mechanisms*, 16 STRATEGIC MGMT. J. 85, 90, 95 (1995).

Borokhovich, Parrino, and Trapani report that firms with a high proportion of outside directors are more likely to choose an outsider as a new CEO. But we know little about whether these choices are better or worse than the insiders chosen by other boards. The authors attempt to test investor' beliefs, as measured by stock returns when the new CEO's identity is announced, but fail to control for signaling effects.<sup>79</sup>

More generally, majority- or supermajority-independent boards, even if they are better at *monitoring* tasks, such as firing an underperforming CEO or approving a takeover bid, may be worse at *advising* CEOs because independent directors are likely to know less about the firm and its industry than inside or affiliated directors. The relative ignorance of independent directors is strengthened by the Clayton Act, which bars director interlocks between competing firms. Whatever the antitrust justification for this ban, it reduces the quality of independent directors by excluding from the pool of potential directors many of the people who would be most knowledgeable about the industry.

### ***The Relationship Between Board Composition and Firm Performance***

The studies discussed above evaluate whether majority-independent boards behave differently than other boards on particular tasks, such as replacing the CEO, defending against a takeover bid, or acquiring another company. They do not address the underlying question of whether firms with majority-independent boards achieve better overall performance than firms without such boards.

#### ***Appointment of New Directors***

One way to address that question is to study stock price reactions to announcements of a change in board composition. Rosenstein and Wyatt find that stock prices increase by about 0.2%, on average, when companies appoint additional outside directors.<sup>80</sup> This increase is statistically significant, but economically small, and could reflect signaling effects, rather than an actual correlation between board composition and firm performance. For example, appointing an additional independent director could signal that a company plans to address its business problems, even if board composition has no effect on the company's ability to address these problems.

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<sup>79</sup> See Kenneth A. Borokhovich, Robert Parrino & Teresa Trapani, *Outside Directors and CEO Selection*, 31 J. FIN. & QUANTITATIVE ANALYSIS 337, 338 (1996).

<sup>80</sup> See Stuart Rosenstein & Jeffrey G. Wyatt, *Outside Directors, Board Independence, and Shareholder Wealth*, 26 J. FIN. ECON. 175, 184 (1990).

In a follow up study, Rosenstein and Wyatt find that stock prices neither increase or decrease on average when an *insider* is added to the board.<sup>81</sup> They find nonrobust evidence that stock price *decreases* when an insider is added to the board of a company where inside directors own less than 5% of the shares and independent directors constitute at least 60% of the board, and more robust evidence that stock price *increases* when an insider is added to the board of a company where inside directors own 5% to 25% of the shares.<sup>82</sup>

### *Board Size*

Some observers believe that a board's effectiveness may decline as board size increases above a moderate number (typical suggestions are for a board of seven to nine members).<sup>83</sup> Several studies report evidence that some boards may be too large. David Yermack reports a negative correlation between board size and Tobin's *q*, and a similar negative correlation between board size and several accounting measures of profitability.<sup>84</sup> Eisenberg, Sundgren, and Wells similarly find a negative correlation between board size and return on assets and operating margin for a sample of 900 small and mid-sized Finnish firms.<sup>85</sup> And Brown and Maloney find that larger board size predicts lower stock price returns to acquiring firms in takeovers.<sup>86</sup> However, Bhagat and Black find that the inverse correlation between board size and performance is not robust to the choice of performance measure.<sup>87</sup>

An indirect way to assess whether boards may be too large is to examine the factors that affect board size. Firms with strong insider control--and therefore perhaps greater incentive to choose optimal board size -- tend to have smaller boards. For example, Gertner and Kaplan report that firms that have undergone reverse leveraged buyouts (undergone a leveraged buyout and then gone public again) have smaller boards than public firms generally.<sup>88</sup> Firms with a founder who still serves as CEO also have smaller boards.<sup>89</sup> This

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<sup>81</sup> See Stuart Rosenstein & Jeffrey G. Wyatt, *Inside Directors, Board Effectiveness, and Shareholder Wealth*, 44 J. FIN. ECON. 229, 248 (1997).

<sup>82</sup> See *id.* at 248-49.

<sup>83</sup> See, e.g., Michael C. Jensen, *The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems*, 48 J. FIN. 831, 865 (1993); Martin Lipton & Jay Lorsch, *A Modest Proposal for Improved Corporate Governance*, 48 BUS. LAW. 59, 67 (1992).

<sup>84</sup> See Yermack (1996), *supra* note 17, at 186-87.

<sup>85</sup> See Theodore Eisenberg, Stefan Sundgren & Martin T. Wells, *Larger Board Size and Decreasing Firm Value in Small Firms*, 48 J. FIN. ECON. 35 (1998).

<sup>86</sup> See BROWN & MALONEY (1998), *supra* note 25.

<sup>87</sup> See BHAGAT & BLACK (1998), *supra* note 17.

<sup>88</sup> See ROBERT GERTNER & STEVEN N. KAPLAN, *THE VALUE-MAXIMIZING BOARD* (Working Paper,



could mean that other firms have boards that are too large. But it could also reflect endogeneity in board size, with different firms optimally choosing boards of different sizes.

### *Composition of Board Committees*

April Klein studies whether the existence and staffing of board committees affects firm performance. She finds little evidence that "monitoring" committees that are usually dominated by independent directors--the audit, compensation, and nominating committees--affect performance, regardless of how they are staffed.<sup>90</sup> In contrast, inside director representation on a board's investment committee correlates with improved firm performance.<sup>91</sup> This suggests that companies with supermajority-independent boards may perform worse because they have too few inside directors to perform this role.

### *The Direct Correlation Between Performance and Board Composition*

The direct approach to assessing whether board composition affects firm performance is simply to measure performance and see whether it correlates with board composition. This approach has been adopted in a number of papers. The results are mixed. Most studies find little correlation, but a number of recent studies report evidence of a negative correlation between the proportion of independent directors and firm performance--the exact opposite of conventional wisdom. We review these studies below, with emphasis on our own recent research.<sup>92</sup>

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1996).

<sup>89</sup> See AGRAWAL & KNOEBER (1999), *supra* note 65.

<sup>90</sup> See Klein (1998), *supra* note 17, at 293, 300.

<sup>91</sup> See *id.* at 293.

<sup>92</sup> We discuss below a reasonable sample of individual studies, focusing on those that seem to us to be the best designed. There is also a recent "meta-analytic" study that we find not to be very helpful. See Dan R. Dalton, Catherine M. Daily, Alan E. Ellstrand & Jonathan L. Johnson, *Meta-Analytic Reviews of Board Composition, Leadership Structure, and Financial Performance*, 19 STRATEGIC MGMT. J. 269 (1998). Dalton and coauthors report little overall evidence of a correlation between firm performance and "board composition." But they define board composition variously as proportion of inside directors, proportion of outside directors, proportion of affiliated directors, and ratio of independent directors to "interdependent" directors. These conflicting definitions almost preclude finding an overall correlation between board composition and firm performance. Still, they find evidence that the correlation between composition and performance is different (and more positive) when board composition is measured as proportion of inside directors than when board composition is measured as proportion of outside directors.

An early study by Stanley Vance reports a positive correlation between proportion of *inside* directors and a number of performance measures.<sup>93</sup> Baysinger and Butler; Hermalin and Weisbach; MacAvoy, Cantor, Dana, and Peck; and Mehran all report no significant same-year correlation between board composition and various measures of corporate performance.<sup>94</sup> Baysinger and Butler report that the proportion of independent directors in 1970 correlates with 1980 return on equity, relative to industry norms.<sup>95</sup> Causation seemed to run from more independent directors to higher performance rather than the other way around. However, Baysinger and Butler use only a single performance measure and their ten-year lag period seems surprisingly long for the hypothesized effects of board composition on performance to develop.<sup>96</sup>

Conversely, several recent studies suggest that firms with more independent directors may perform *worse*. David Yermack reports a significant *negative* correlation between proportion of independent directors and Tobin's *q* in an ordinary least squares regression, but this effect disappears in a fixed effects regression, and he finds no significant correlation between board composition and several other performance measures.<sup>97</sup> Barnhart and Rosenstein confirm Yermack's results for Tobin's *q* using both ordinary least squares and various simultaneous equations approaches.<sup>98</sup> Agrawal and Knoeber report a similar negative correlation between proportion of *outside* directors and Tobin's *q*.<sup>99</sup> However, in follow up work, they find that this correlation loses statistical significance if they include in the regression a number of variables that proxy for the firm's dependence on political decisions (the variables are presence of a public relations office in Washington, D.C., percentage of sales to the government, existence of a company-sponsored political action committee, and

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<sup>93</sup> See STANLEY C. VANCE, *BOARDS OF DIRECTORS: STRUCTURE AND PERFORMANCE* 30-38 (1964).

<sup>94</sup> See Barry D. Baysinger & Henry N. Butler, *Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition*, 1 J.L. ECON. & ORG. 101, 116 (1985); Hermalin & Weisbach (1991), *supra* note 78, at 111; Paul W. MacAvoy, Scott Cantor, Jim Dana & Sarah Peck, *ALI Proposals for Increased Control of the Corporation by the Board of Directors: An Economic Analysis*, in STATEMENT OF THE BUSINESS ROUNDTABLE ON THE AMERICAN LAW INSTITUTE'S PROPOSED "PRINCIPLES OF CORPORATE GOVERNANCE AND STRUCTURE: RESTATEMENT AND RECOMMENDATIONS," at C-1, C-34 (1983); Hamid Mehran, *Executive Compensation Structure, Ownership and Firm Performance*, 38 J. FIN. ECON. 163 (1995).

<sup>95</sup> See Baysinger & Butler (1985), *supra* note 94, at 116.

<sup>96</sup> See *id.* at 115.

<sup>97</sup> See Yermack (1996), *supra* note 17, at 195, 202.

<sup>98</sup> See Barnhart & Rosenstein (1998), *supra* note 58, at 11-12.

<sup>99</sup> See Anup Agrawal & Charles R. Knoeber, *Firm Performance and Mechanisms to Control Agency Problems Between Managers and Shareholders*, 31 J. FIN. & QUANTITATIVE ANALYSIS 377, 390 (1996).

pollution control expenditures).<sup>100</sup> Ronald Anderson and coauthors report a significant negative correlation between proportion of independent directors and price/sales ratio; however this correlation exists only for singleline and not for multiline firms.<sup>101</sup>

Most studies of the effect of board composition on firm performance focus on independent directors or inside directors; affiliated outside directors are excluded from the analysis. April Klein finds no evidence of a consistent relationship between different types of affiliated outside directors and firm performance. She also reports that affiliated directors are more likely to be found on the boards of firms that need the affiliated director's expertise, which suggests that these directors have a useful role to play.<sup>102</sup>

### *International Evidence*

Lawrence and Stapledon seek to replicate for Australian boards of directors the Bhagat and Black study of American boards of directors discussed below. They find only scattered, nonrobust correlations between various performance measures and proportion of independent directors.<sup>103</sup>

### *Evidence From Bhagat and Black*

In light of the scant evidence on the relationship between firm performance and board composition, we recently undertook a careful examination of the direct relationship between board composition and firm performance.<sup>104</sup> We attempted to correct some of the weaknesses in prior work by using a large sample to improve signal-to-noise ratio; measuring performance over a long period of time, rather than just at a single date; using a number of different performance measures; and employing a large set of control variables, including CEO stock ownership, outside blockholder ownership, independent director ownership, board size, and firm size. Selected results from this study are reported below.

Contrary to conventional wisdom, we find evidence of a *negative* relationship between the degree of board independence (proxied by an "independence" variable that equals the proportion of independent directors minus the proportion of inside directors). These results

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<sup>100</sup> See AGRAWAL & KNOEBER (1999), *supra* note 65.

<sup>101</sup> See ANDERSON, BATES, BIZJAK & LEMMON (1998), *supra* note 55.

<sup>102</sup> See KLEIN (1999), *supra* note 61.

<sup>103</sup> See JEFFREY LAWRENCE & G.P. STAPLEDON, DO INDEPENDENT DIRECTORS ADD VALUE? (Working Paper, 1999); *see also* BHAGAT & BLACK (1998), *supra* note 17.

<sup>104</sup> Bhagat & Black (1998), *supra* note 17.

are driven by poor performance at firms with supermajority-independent boards. Firms with an independence level of 0.4 or higher (which corresponds, for a typical eleven-member board with one affiliated director, to eight or nine independent directors and only one or two insiders) perform worse than other firms. We find no strong correlation between board independence and firm performance for other firms. This suggests that it may be valuable for boards to include at least a moderate number of inside directors. A high proportion of independent directors also correlates with slower growth.

Our study was based on the Institutional Shareholder Services database from mid-1991. This database contains information on 957 large U.S. public corporations, principally from early 1991. We supplemented this data on directors with data on the financial performance of these firms between 1985 and 1995, obtained from Compustat, data on the stock price performance of these firms between 1985 and 1995, obtained from CRSP, and data on share ownership by management, the board of directors, and 5% shareholders, obtained by reading 1991 proxy statements.

The median firm in our study had an eleven member board, including seven independent directors, one affiliated outsider, and three insiders (typically including the CEO and chief financial officer). About 70% of the firms had majority-independent boards. The median of three inside directors in 1991 compares to a median of two today, due to changes since 1991 in the composition of a typical board.<sup>105</sup>

Table 3 reports our results for regressions of different measures of performance against board independence and other control variables. The independent variables are *INDEP* (equal to proportion of independent directors – proportion of inside directors), a constant term (not shown), board size, several measures of stock ownership by insiders and outside blockholders (percentage ownership by the CEO, percentage ownership by outside directors, and number of outside 5% blockholders), firm size (measured as the natural logarithm of 1990 sales), and an industry control that equals the mean value of the dependent variable for the broad industry group into which each firm falls (utility, financial, transportation, or industrial). We report results for four time periods, 1985-1987, 1988-1990, 1991-1993, and 1994-1995. But the most important periods are 1988-1990 and 1991-1993, which are closest in time to the early 1991 date when we measure board composition and stock ownership.

Board independence, proxied by *INDEP*, correlates *negatively* with our performance measures. The coefficients on all performance measures are negative; are statistically significant or marginally significant in 1988-1990 for all performance variables, and are significant or marginally significant in 1991-1993 for all variables except *operating margin (OPI/SAL)*.

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<sup>105</sup> See *supra* tbl. 1.

**Table 3**  
**Regression: Performance Variables on Board Independence and Ownership Structure**

Regression results for various performance variables on board independence and stock ownership for 928 large U.S. public companies for various subperiods during 1985-1995. The performance variables are Tobin's  $q$  ( $Q$ ), return on assets (OPI/AST), turnover ratio (SAL/AST), operating margin (OPI/SAL), and sales per employee (SAL/EMP).  $Q$  85-87 means average  $Q$  during 1985-1987 and similarly for other performance variables. Board and stock ownership variables are based on early 1991 data. Industry control for each regression is the mean value of the dependent variable for that regression for each firm's industry group (utility, financial, transportation, or industrial), from Compustat. Sample size varies from 660 to 692 because of missing data.  $t$ -statistics are in parentheses. Significant results ( $p < .05$ ) are in **boldface** (not shown for log(sales) or industry control).

Dependent Variable	Independent Variables							Adj. R <sup>2</sup>
	Board Independence ( <i>INDEP</i> )	Board Size	CEO Ownership	Outside Director Ownership	No. of Outside 5% Holders	Log(1990 Sales)	Industry Control	
Q 85-87	<b>-.50 (-4.64)</b>	-.002 (-.15)	.001 (.10)	.004 (.67)	<b>-.08 (-3.51)</b>	-.17 (-6.37)	1.45 (11.2)	.2966
Q 88-90	<b>-.40 (-4.60)</b>	.004 (.53)	<b>.006 (2.17)</b>	.004 (.96)	<b>-.09 (-4.77)</b>	-.15 (-7.16)	1.65 (13.6)	.3642
Q 91-93	<b>-.28 (-2.41)</b>	.005 (.41)	<b>.009 (2.32)</b>	.007 (1.24)	<b>-.08 (-3.38)</b>	-.16 (-5.63)	1.53 (11.5)	.2636
Q 94-95	-.11 (-1.17)	-.002 (-.26)	.004 (1.37)	.008 (1.87)	<b>-.06 (-3.30)</b>	-.08 (-3.68)	1.15 (13.4)	.2800
OPI/AST 85-87	<b>-.07 (-4.53)</b>	.001 (.16)	-.001 (-.74)	<b>.002 (2.50)</b>	<b>-.01 (-2.30)</b>	-.001 (-.20)	1.04 (4.03)	.0878
OPI/AST 88-90	<b>-.06 (-4.47)</b>	-.002 (-1.10)	.001 (.35)	.001 (1.30)	-.01 (-1.82)	.002 (.51)	2.09 (6.09)	.1204
OPI/AST 91-93	-.03 (-1.74)	.001 (.13)	.001 (1.10)	.001 (1.87)	-.004 (-1.26)	.001 (.17)	1.09 (1.97)	.0178
OPI/AST 94-95	-.02 (-1.33)	.001 (.07)	.001 (1.18)	<b>.002 (2.92)</b>	-.003 (-1.12)	.002 (.62)	1.32 (4.56)	.0604
SAL/AST 85-87	<b>-.42 (-4.85)</b>	<b>-.023 (-2.86)</b>	-.004 (-1.52)	.006 (1.42)	<b>.045 (2.40)</b>	.15 (7.06)	1.03 (14.8)	.3622
SAL/AST 88-90	<b>-.36 (-4.52)</b>	<b>-.025 (-3.25)</b>	-.002 (-.95)	.005 (1.26)	<b>.064 (3.68)</b>	.13 (6.47)	1.31 (16.4)	.3946
SAL/AST 91-93	<b>-.25 (-3.26)</b>	<b>-.025 (-3.26)</b>	-.002 (-.71)	.006 (1.50)	<b>.064 (3.86)</b>	.12 (6.10)	1.24 (16.2)	.3828
SAL/AST 94-95	<b>-.23 (-3.22)</b>	<b>-.025 (-3.22)</b>	-.002 (-.96)	<b>.007 (2.10)</b>	<b>.061 (3.84)</b>	.12 (6.31)	1.18 (16.9)	.4132
OPI/SAL 85-87	-.03 (-1.24)	-.004 (-1.47)	.001 (.59)	.001 (.19)	-.009 (-1.83)	.01 (1.64)	.94 (13.4)	.2708
OPI/SAL 88-90	-.04 (-1.82)	<b>-.005 (-2.08)</b>	.001 (1.86)	-.001 (-.27)	-.007 (-1.58)	.02 (2.81)	1.04 (13.1)	.2724
OPI/SAL 91-93	-.01 (-.40)	-.001 (-.26)	.001 (1.90)	-.001 (-.38)	<b>-.011 (-2.56)</b>	.01 (1.49)	.81 (13.0)	.2780
OPI/SAL 94-95	-.01 (-.52)	-.001 (-.28)	.001 (1.60)	.001 (.34)	<b>-.009 (-2.00)</b>	.01 (2.23)	.85 (12.5)	.2691
SAL/EMP 85-87	-31 (-1.44)	-2.38 (-.96)	-.63 (-.91)	.34 (.31)	1.26 (.25)	18.3 (3.21)	.62 (5.14)	.0645
SAL/EMP 88-90	<b>-74 (-2.65)</b>	-1.53 (-.47)	-.18 (-.20)	.10 (.07)	6.86 (1.06)	27.0 (3.86)	.47 (3.18)	.0465
SAL/EMP 91-93	<b>-58 (-2.18)</b>	-3.30 (-1.07)	-.15 (-.18)	.03 (.03)	3.09 (.50)	33.8 (4.13)	.48 (4.08)	.0716
SAL/EMP 94-95	-56 (-1.80)	-4.04 (-1.12)	-1.01 (-.99)	.33 (.21)	4.01 (.56)	41.0 (4.90)	.51 (4.56)	.0857

The relationship between performance and board independence could be more complex than the linear relationship that is examined in Table 3. For example, it could be valuable for firms to have a significant number of inside directors--say 30%--to achieve the benefits of these directors' firm-specific knowledge, but thereafter unimportant or even detrimental to further increase the proportion of inside directors. Similarly, it could be valuable to have more independent than inside directors, or to have a majority of independent directors. To test these

hypotheses, we use dummy variables to divide boards into different ranges of independence, defined as follows:

*Dummy1*: equal to 1 if  $INDEP < 0$  (more inside than independent directors); and 0 otherwise

*Dummy2*: equal to 1 if  $0 \leq INDEP < 0.2$  (for example, an 11-member board with 6 independent directors, 4 inside directors, and one affiliated director will have  $INDEP = .18$ ); and 0 otherwise

*Dummy3*: equal to 1 if  $0.2 \leq INDEP < 0.4$  (for example, an 11-member board with 7 independent directors, 3 inside directors, and one affiliated director will have  $INDEP = .36$ ); and 0 otherwise

*Residual category*: supermajority-independent boards, with  $INDEP \geq 0.4$

Other independent variables are the same as in Table 3, but are not shown in Table 4. About 15% of our sample has  $Dummy1 = 1$ ; 15% of the sample has  $Dummy2 = 1$ ; 20% of the sample has  $Dummy3 = 1$ ; the remaining 50% are in the residual category (supermajority-independent boards).

In Table 4, the coefficients on all three dummy variables are positive for all performance variables except *OPI/SAL*. This suggests that firms with supermajority-independent boards ( $INDEP > 0.4$ ), which fall into the residual category that is not shown in the table, perform *worse* than other firms. Averaging the 1988-1990 and 1991-1993 periods and averaging across the *Dummy1*, *Dummy2*, and *Dummy3* groups, going from a supermajority-independent board with  $DIFF > 0.4$  to a less independent board predicts a 0.24 increase in Tobin's  $q$ , and a 3.4% increase in return on assets. These are economically significant differences.

**Table 4**  
**Regression: Firm Performance with Board Independence Dummy Variables**

Regression results for various performance variables on dummy variables for board independence and on stock ownership variables for 928 large U.S. public companies for various subperiods during 1985-1995. The performance variables Q, OPI/AST, SAL/AST, OPI/SAL, and SAL/EMP are defined as in Table 3. Board and stock ownership variables are based on early 1991 data. Industry control for each regression is the mean value of the dependent variable for that regression for each firm's industry group (utility, financial, transportation, or industrial), from Compustat. Sample size varies from 660 to 692 because of missing data. *t*-statistics are in parentheses. Significant results ( $p < .05$ ) are in **boldface**.

Dependent Variable	Independent Variables (other independent variables same as Table 3 but not shown)			Adj. R <sup>2</sup>
	<i>Dummy1</i> = 1 if <i>INDEP</i> < 0; otherwise = 0	<i>Dummy2</i> = 1 if 0 ≤ <i>INDEP</i> < 0.2; otherwise = 0	<i>Dummy3</i> = 1 if 0.2 ≤ <i>INDEP</i> < 0.4; otherwise = 0	
Q 85-87	<b>.39 (3.66)</b>	<b>.28 (3.05)</b>	.10 (1.25)	.2910
Q 88-90	<b>.33 (3.83)</b>	<b>.27 (3.76)</b>	<b>.15 (2.47)</b>	.3649
Q 91-93	.17 (1.47)	<b>.29 (3.02)</b>	<b>.24 (2.90)</b>	.2700
Q 94-95	-.02 (-.24)	<b>.22 (2.89)</b>	<b>.13 (2.06)</b>	.2890
OPI/AST 85-87	<b>.07 (4.37)</b>	<b>.03 (2.00)</b>	<b>.03 (2.90)</b>	.0684
OPI/AST 88-90	<b>.06 (4.35)</b>	<b>.03 (2.29)</b>	<b>.04 (3.54)</b>	.1256
OPI/AST 91-93	.01 (.71)	<b>.03 (2.20)</b>	<b>.03 (2.52)</b>	.0243
OPI/AST 94-95	.002 (.18)	.02 (1.77)	<b>.02 (2.13)</b>	.0647
SAL/AST 85-87	<b>.41 (4.82)</b>	.13 (1.78)	.08 (1.30)	.3604
SAL/AST 88-90	<b>.38 (4.77)</b>	.10 (1.46)	.07 (1.24)	.3949
SAL/AST 91-93	<b>.27 (3.54)</b>	.05 (.78)	.03 (.49)	.3828
SAL/AST 94-95	<b>.25 (3.47)</b>	.05 (.75)	.03 (.58)	.4130
OPI/SAL 85-87	.02 (.88)	-.004 (-.21)	.01 (.80)	.3017
OPI/SAL 88-90	.01 (.76)	.01 (.83)	.02 (1.62)	.3014
OPI/SAL 91-93	-.01 (-.71)	.02 (1.28)	.01 (.56)	.3185
OPI/SAL 94-95	-.02 (-.86)	.02 (1.44)	.01 (.81)	.2957
SAL/EMP 85-87	26 (1.20)	11 (.63)	24 (1.54)	.0626
SAL/EMP 88-90	<b>80 (2.94)</b>	17 (.71)	24 (1.19)	.0506
SAL/EMP 91-93	<b>60 (2.30)</b>	18 (.79)	20 (1.05)	.0701
SAL/EMP 94-95	46 (1.50)	16 (.62)	22 (.94)	.0888

Apart from the apparently poorer performance of firms with supermajority-independent boards, Table 4 does not show evidence of strong differences between the *Dummy1*, *Dummy2*, and *Dummy3* groups. In particular, there is no evidence that boards with a majority- (but not supermajority-) independent board (the *Dummy2* and *Dummy3* groups) perform better than firms with more inside than independent directors (the *Dummy1* group).

No other study addresses directly whether supermajority-independent boards might be suboptimal. However, several studies provide hints of a curvilinear relationship between performance and proportion of independent directors, which suggests that some boards can contain too many independent directors. Barnhart and Rosenstein report a curvilinear relationship between Tobin's  $q$  and proportion of independent directors, with a significant negative coefficient on (proportion of independent directors)<sup>2</sup>, implying that Tobin's  $q$  is lower for firms with highly independent boards.<sup>106</sup> Geddes and Vinod report a curvilinear relationship between CEO tenure and proportion of independent directors, with a significant positive coefficient on (proportion of independent directors)<sup>2</sup>, implying that highly independent boards are less likely to replace CEOs.<sup>107</sup> Byrd and Hickman, while finding generally that firms with majority-independent boards earn higher stock price returns than other firms when they make takeover bids, find that this trend reverses for firms with more than 60% independent directors: bidders with over 70% independent directors earn stock price returns as poor as those with fewer than 40% independent directors.<sup>108</sup> Finally, two studies by Wagner, Stimpert, and Furara--a meta-analysis of other studies and their own study-- provide evidence of a curvilinear relationship between board composition and return on assets, with mixed boards apparently performing best. However, this correlation disappears when return on equity is used as the performance measure.<sup>109</sup>

The current evidence *suggests* a possible negative correlation between supermajority-independent boards and firm performance, but hardly proves that such a relationship exists. Still less can the current data let us assess with confidence whether there is not only correlation but *causation* running from highly independent boards to worse firm performance. It is always possible that some additional factor, left out of the regressions, can explain both why certain firms perform poorly or grow more slowly and why these firms have a high degree of board independence.

One possibility is that board composition is endogenous--different firms need different types of boards. In particular, slowly growing firms may need more independent directors to control the conflict between managers and shareholders over what to do with free cash flow that cannot be profitably reinvested in the firm's core business. If these firms are also less profitable than more rapidly growing firms, then a high degree of board independence would be a result, rather than a cause, of whatever is causing the firm to grow slowly and be less profitable.

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<sup>106</sup> See Barnhart & Rosenstein (1998), *supra* note 58, at 10-11.

<sup>107</sup> See Geddes & Vinod (1998), *supra* note 14.

<sup>108</sup> See Byrd & Hickman (1992), *supra* note 22, at 213-16.

<sup>109</sup> See John A. Wagner III, J. L. Stimpert & Edward I. Furara, *Board Composition and Organizational Performance: Two Studies of Insider/Outsider Effects*, 35 J. MGMT. STUD. 655 (1998).



A crude test for this possibility is contained in Table 2 above, where we find no evidence that firms respond to slower growth or lower profitability by increasing their level of board independence. Also, Barnhart and Rosenstein find that the negative correlation between Tobin's  $q$  and (proportion of independent directors)<sup>2</sup> is reasonably (but not entirely) robust when they control for endogeneity in a simultaneous equations framework. Still, it is possible that additional tests would find stronger evidence of an endogenous relationship between board independence and firm profitability and growth, in which board independence emerges as a result rather than a cause of lower profitability or slower growth.

### ***Policy Implications***

At the very least, there is no convincing evidence that *increasing* board independence, relative to the norms that currently prevail among large American firms will improve firm performance. And there is some evidence suggesting the opposite--that firms with supermajority-independent boards perform worse than other firms, and that firms with more inside than independent directors perform about as well as firms with majority- (but not supermajority-) independent boards.

### ***The Case for Inside Directors***

Why might having a reasonable number of inside directors add value, as the data reported above suggests? One possibility is that an optimal board contains a mix of inside, independent, and perhaps also affiliated directors, who bring different skills and knowledge to the board.<sup>110</sup> Inside directors are highly knowledgeable about the company's operations, but conflicted. Independent directors are independent, but often ignorant about what is happening inside the company. The independent directors may be quicker to act in a crisis because they are independent, but more likely to do the wrong thing because they are ignorant. Similarly, affiliated directors, because of their ongoing business relationship with the firm, may understand the firm's strengths and weaknesses better than independent directors. Thus, the best board might contain a mix of all three types.

A second possibility is that having a few insiders on the board may make it easier for other directors to evaluate them as potential future CEOs.<sup>111</sup> Often the best candidates for CEO are the firm's other senior managers. Perhaps, if senior managers sit on the board of directors, the other board members, who must make the CEO succession decision, will get a better feel for their abilities. If the senior managers are on the board, they must attend, must vote, and are

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<sup>110</sup> See Baysinger & Butler (1985), *supra* note 94.

<sup>111</sup> See RICHARD F. VANCIL, *PASSING THE BATON: MANAGING THE PROCESS OF CEO SUCCESSION* 139 (1987); Michael S. Weisbach, *Outside Directors and CEO Turnover*, 20 J. FIN. ECON. 431, 433-34 (1988).

expected to speak. That could produce more extensive and different interaction with the board than if they are merely invited by the CEO, do not vote, may not be expected to speak, and could be disinvented by the CEO the next time if they say the wrong thing. Thus, merely inviting other senior managers to attend board meetings, as some advocates of supermajority-independent boards suggest, may not be a full substitute for having them on the board.

Third, as Baysinger and Hoskisson argue, inside directors may be better at strategic planning decisions.<sup>112</sup> This hypothesis is consistent with April Klein's evidence that inside director representation on investment committees of the board correlates with improved firm performance.<sup>113</sup> If strategic planning is an important board function, and insiders help in performing it, then supermajority-independent boards may contain too few insiders to perform this function effectively.<sup>114</sup>

Fourth, there is a tradeoff between independence and incentives. Most independent directors own trivial amounts of their company's shares, and hence have limited incentives to monitor carefully. Inside directors lack independence, but have their human capital and often most of their financial capital committed to their company.<sup>115</sup>

A priori, it is not obvious that independence (without knowledge or incentives) leads to better director performance than knowledge and strong incentives (without independence). Maybe a better answer is to build a board with some knowledgeable, incentivized inside directors, and some independent directors--who might thereby become better informed, and could also be better incentivized than many independent directors are today.

### *Making Independent Directors More Effective*

One question raised by Bhagat and Black and other recent studies that find a negative correlation between board independence and performance is how can independent directors be made to perform better? Many independent directors own little stock in the companies they direct. While director stock ownership has increased recently, a 1987 survey by Patton and Baker found that 55% of outside directors owned 500 or fewer shares in the companies they

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<sup>112</sup> See Barry Baysinger & Robert E. Hoskisson, *The Composition of Boards of Directors and Strategic Control: Effects on Corporate Strategy*, 15 ACAD. MGMT. REV. 72 (1990).

<sup>113</sup> See Klein (1998), *supra* note 17.

<sup>114</sup> See Jill E. Fisch, *Taking Boards Seriously*, 19 CARDOZO L. REV. 265, 267-75 (1997).

<sup>115</sup> See Brian J. Hall & Jeffrey B. Liebman, *Are CEOs Really Paid Like Bureaucrats?*, 113 Q.J. ECON. 653 (1998) (providing evidence on the sensitivity of managers' financial wealth to firm performance).

direct--surely too few to convey meaningful incentives.<sup>116</sup> More recently, Bhagat, Carey, and Elson find that not only the percentage ownership, but the median *dollar value* of outside directors' holdings declines as firm size increases.<sup>117</sup> This suggests that the largest firms, which tend to have the most independent boards, also have the least incentivized boards.

There is some evidence that greater share ownership may improve independent directors' performance. For example, the data in Table 3 above show some evidence of a correlation between outside director ownership and firm performance. Bhagat and Black also find modest evidence of a positive correlation between firm performance and an independent variable that interacts proportion of independent directors with percentage ownership of shares by outside directors.<sup>118</sup> And Bhagat, Carey, and Elson find evidence that director stock ownership correlates with the probability of a disciplinary change of CEO.<sup>119</sup>

This evidence does not contradict the evidence discussed above of potential value from having a moderate number of inside directors. It merely suggests that whatever number of independent directors a firm has, they may perform better if they have stronger stock-based incentives to do so.

A second possibility is that today's "independent" directors are not independent enough. Perhaps, as Gilson and Kraakman argue, "corporate boards need directors who are not merely independent [of management], but who are *accountable* [to shareholders] as well."<sup>120</sup> But if so, institutional investors may need to put their own representatives on boards of directors, a step that few are interested in and which is hard for them to take under current U.S. legal rules.<sup>121</sup>

A third possibility is that some directors who are classified as independent are beholden to the company or its current CEO in ways too subtle to be captured in customary definitions

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<sup>116</sup> See Arch Patton & John C. Baker, *Why Won't Directors Rock the Boat?*, HARV. BUS. REV., Nov.-Dec. 1987, at 10, 11.

<sup>117</sup> See Sanjai Bhagat, Dennis C. Carey & Charles M. Elson, *Director Ownership, Corporate Performance, and Management Turnover*, 54 BUS. LAW. 885 (1999).

<sup>118</sup> See BHAGAT & BLACK (1998), *supra* note 17.

<sup>119</sup> See Bhagat, Carey & Elson (1999), *supra* note 117.

<sup>120</sup> Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863, 865 (1991).

<sup>121</sup> See generally Bernard S. Black, *Shareholder Passivity Reexamined*, 89 MICH. L. REV. 520 (1990); MARK J. ROE, *STRONG MANAGERS, WEAK OWNERS: THE POLITICAL ROOTS OF AMERICAN CORPORATE FINANCE* (1994).

of "independence." For example, some nominally independent directors may serve as paid advisors or consultants to a company, may be employed by a university or foundation that receives financial support from the company, or may have a personal relationship with the CEO that compromises their independence. This possibility is consistent with evidence that directors who were appointed during the current CEO's tenure are more generous in determining the CEO's compensation.<sup>122</sup> One way to begin to untangle these subtle relationships would be for the SEC to require additional disclosure of financial or personal ties between directors (or the organizations they work for) and the company or its CEO. It is also possible that directors who have been on the board for a long time, though nominally independent, may simply be less energetic than newer directors.

Fourth, perhaps some types of independent directors are more valuable than others. Maybe CEOs of companies in other industries (who are, by number, the majority of independent directors) are too busy with their own business, know too little about a different business, are overly generous in compensating another CEO, or too ready to give another CEO the broad discretion that they would like at their own company. As Patton and Baker observe, "an overwhelming preponderance of [outside] board members [have] a managerial mind-set."<sup>123</sup> Maybe too, "visibility" directors--well-known persons with limited business experience, often holding multiple directorships and adding gender or racial diversity to a board, are not effective on average.

These possibilities are consistent with Stanley Vance's finding that directors' technical expertise in the company's industry correlates with firm performance.<sup>124</sup> But this explanation suggests that the conventional wisdom favoring supermajority-independent boards, regardless of the background of the individual directors, may be fruitless or even counterproductive, unless independent directors have particular attributes, such as close knowledge of the company's industry.

A fifth possibility, suggested by April Klein's research on board committee structures,<sup>125</sup> is that independent directors can add value, but only if they are embedded in an appropriate committee structure. This would let independent directors perform the monitoring function that they may be best suited for while letting inside and affiliated outside directors perform the advising function to which they may bring more firm-specific expertise. However, most large

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<sup>122</sup> See Core, Holthausen & Larcker (1999), *supra* note 35; Yermack (1997), *supra* note 40, at 461-62.

<sup>123</sup> See Patton & Baker (1987), *supra* note 116, at 10.

<sup>124</sup> See Stanley C. Vance, *Corporate Governance: Assessing Corporate Performance by Boardroom Attributes*, 6 J. BUS. RES. 203, 219 (1978).

<sup>125</sup> See Klein (1998), *supra* note 17, at 300.

firms, like those in our sample, already have such committee structures, and Klein finds little evidence that the principal outsider-dominated "monitoring" committees--audit, compensation, and nominating committees--affect performance, regardless of how they are staffed.<sup>126</sup>

### *Why Might Firms Adopt Suboptimal Board Structures*

The evidence discussed above on the value of having a moderate number of inside directors suggests that board structures may be suboptimal--too heavily weighted toward independent directors. This would be in tension with the general truism that market forces provide incentives for firms to choose good governance structures. Why then would firms depart from optimal governance in this instance?

It is not hard to develop explanations for why firms might behave in this way. Conventional wisdom is a powerful force. If no one is sure what difference board composition makes, conventional wisdom calls for supermajority-independent boards, and the possible benefits of having a moderate number of inside directors are subtle and controversial, managers and directors might easily choose the safe course of meeting investor demand for ever-more-independent boards. As Jill Fisch explains:

The pressure on corporations to conform to "good governance" mechanisms is substantial. Corporations are subjected to highly publicized report cards and rating systems evaluating their governance practices. Institutional investors are registering protest votes at annual meetings in an effort to persuade corporations to . . . [adopt more independent boards]. These efforts are supported by regulatory developments that place a growing emphasis on the use of independent boards or board committees . . . .<sup>127</sup>

It takes a strong board to oppose these pressures, knowing that if the firm performs poorly, some of the blame will be placed, rightly or wrongly, on the board for not being sufficiently independent.

Moreover, if many boards are (suboptimally) too dominated by independent directors, that is hardly the only example of market forces being insufficient to force large firms to adopt optimal governance structures. The evidence discussed above that some firms may have overly large boards is a second example. More generally, as Michael Jensen comments: "Substantial data support the proposition that the internal control systems of publicly held corporations have generally failed to cause managers to maximize efficiency and value. . . . [In particular], few firms ever restructure themselves or engage in a major strategic redirection without a crisis .

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<sup>126</sup> See *id.* at 293-95.

<sup>127</sup> Fisch (1997), *supra* note 114, at 265-66 (footnotes omitted).

..."<sup>128</sup> That suboptimality occurs elsewhere in the corporate governance framework does not, of course, prove that boards are suboptimal along the dimension of independence. But it suggests that evidence of suboptimality in board independence cannot be dismissed by a rhetorical claim that market forces should weed out firms that choose suboptimal board structures.

### *Next Steps*

We need more research that explores whether the results reported above, suggesting that a moderate number of inside directors might add value, are robust. Pending results of additional tests, the burden of proof should perhaps shift to those who argue that ever-greater board independence is an important element of improved corporate governance. In our judgment, institutional investors and advocacy groups should back off a few steps, and refrain from criticizing firms that want to experiment with board structures that make sense for them. A board with, say, six independent directors, four inside directors, and one affiliated director, instead of nine independent directors and two inside directors, might bring some subtle benefits. At the same time, the independent directors will still numerically dominate the board, and can take appropriate action in a crisis.

Other important steps include looking for factors that, when combined with independence, might improve board (and hence firm) performance. Steps like insisting that independent directors own more shares, or that they be more completely independent of management, could be worth trying. It is worth stressing that the available data do not support a wholesale return to the 1960s, when boards were insider-dominated and often passive. They do suggest that companies should be freer to experiment with departures from the norm of a supermajority-independent board.

A related possibility, supported by Millstein and MacAvoy's evidence that indicia of an activist board correlate with higher industry-adjusted return on assets, is that boards would be strengthened by procedures that facilitate monitoring, such as an annual meeting of outside directors without inside directors present, periodic formal evaluation of the CEO and the performance of directors, or the appointment of a "lead" outside director.<sup>129</sup> The procedures may be important even if board composition, within broad ranges, is not.

A fourth possibility is that different firms benefit from different board structures. There is not much evidence that board composition relates in a systematic fashion to a firm's prior performance or growth opportunities. But perhaps it ought to. Here too, the critical first step

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<sup>128</sup> Jensen (1993), *supra* note 83, at 850.

<sup>129</sup> See Ira M. Millstein & Paul W. MacAvoy, *The Active Board of Directors and Improved Performance of the Large Publicly Traded Corporation*, 98 COLUM. L. REV. 1283, 1314 (1998).

is relaxing the conventional wisdom that *all* large companies should have supermajority-independent boards, to allow greater experimentation.

A related endogeneity hypothesis is that alternate mechanisms for controlling agency costs in large firms (including independent directors, high leverage, CEO stock ownership, large outside blockholders, and takeovers) act either as substitutes or complements.<sup>130</sup> These interaction effects are a potentially fruitful avenue for further research.

A fifth explanation for the lack of a strong correlation between board composition and firm performance is that an optimal board contains a mix of inside, independent, and affiliated outside directors, who bring different skills and knowledge to the board.<sup>131</sup> But if a mixed board is optimal, then many large companies may have too few inside directors to perform this role.

Then, too, board independence may simply not be very important, on average and over time, compared to other factors that influence corporate performance. That hypothesis is consistent with the mixed results from a number of recent studies of the effects of corporate governance activism by institutional investors targeted at specific companies,<sup>132</sup> with evidence that social connections are important in determining who is chosen to fill board seats, while

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<sup>130</sup> See, e.g., Hermalin & Weisbach (1991), *supra* note 78, at 111-12; Mehran (1995), *supra* note 94, at 179-80; Rediker & Seth (1995), *supra* note 78, at 97-98.

<sup>131</sup> See Baysinger & Butler (1985), *supra* note 94, at 121; Fisch (1997), *supra* note 114, at 280, 289-90.

<sup>132</sup> See CATHERINE M. DAILY, JONATHAN L. JOHNSON, ALAN E. ELLSTRAND & DAN R. DALTON, INSTITUTIONAL INVESTOR ACTIVISM: FOLLOW THE LEADERS? (Working Paper, 1996b); Diane Del Guercio & Jennifer Hawkins, *The Motivation and Impact of Pension Fund Activism*, 52 J. FIN. ECON. (forthcoming June 1999); Stuart L. Gillan & Laura T. Starks, *Corporate Governance Proposals and Shareholder Activism: The Role of Institutional Investors*, \_\_ J. FIN. ECON. (forthcoming 1999); Tim C. Opler & Jonathan Sokobin, *Does Coordinated Institutional Shareholder Activism Work?: An Analysis of the Activities of the Council of Institutional Investors* (Mar. 1997) <<http://www.cob.ohio-state.edu/~fin/faculty/opler/cii97.html>>; Michael P. Smith, *Shareholder Activism by Institutional Investors: Evidence from CalPERS*, 51 J. FIN. 227, 251 (1996); Deon Strickland, Kenneth W. Wiles & Marc Zenner, *A Requiem for the USA: Is Small Shareholder Monitoring Effective?*, 40 J. FIN. ECON. 319 (1996); JOHN D. WAGSTER & ANDREW K. PREVOST, WEALTH EFFECTS OF THE CALPERS' "HIT LIST" TO SEC CHANGES IN THE PROXY RULES (Working Paper, 1996), available in Social Science Research Network Electronic Library, <[http://papers.ssrn.com/paper.taf?abstract\\_id=2129](http://papers.ssrn.com/paper.taf?abstract_id=2129)>; Sunil Wahal, *Pension Fund Activism and Firm Performance*, 31 J. FIN. & QUANTITATIVE ANALYSIS 1, 20 (1996).

home-firm performance is not,<sup>133</sup> and with evidence that CEOs are able to adopt strategies to maintain their power despite increases in board independence.<sup>134</sup>

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<sup>133</sup> Gerald F. Davis, *Who Gets Ahead in the Market for Corporate Directors: The Political Economy of Multiple Board Memberships*, 1993 ACAD. MGMT. BEST PAPERS PROC. 202; GERALD F. DAVIS & GREGORY E. ROBBINS, CHANGES IN THE MARKET FOR OUTSIDE DIRECTORS, 1986-1994 (Working Paper, 1996).

<sup>134</sup> See James D. Westphal, *Board Games: How CEOs Adapt to Increases in Structural Board Independence from Management*, 43 ADMIN. SCI. Q. 511 (1998).



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