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Accounting for Taste: Board Member
Preferences and Corporate Policy Choices

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Board Member Preferences and Corporate Policy Choices

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Abstract

This paper explores whether firms that share common directors also pursue similar corporate policies. Using a sample of 885 U.S. firms with common directors, we find that director fixed effects strongly explain variation in firms' governance, financial, disclosure, and strategic policy choices. Moreover, the director fixed effects provide incremental explanatory power over traditional economic determinants of firms' policies. Consistent with our hypotheses, the director effects are less pronounced in large firms, in firms with more outside board members, and for directors with numerous outside board appointments. Our evidence is more consistent with directors and firms "matching" their policy preferences rather than directors "imposing" their policy preferences on firms.

Key words: Board of directors; Corporate governance; Corporate policies; Disclosure

JEL classification: D21, G34, M41

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"De gustibus non est disputandum"

...Latin maxim

1. Introduction

In this paper, we explore whether commonality in firms' corporate policies is associated with the presence of common directors across firms. Recent corporate governance scandals have placed the spotlight on directors with multiple board appointments and raised concerns that corporate misdeeds can be traced across directorships (Weil 2002, Wall Street Journal). This study provides some of the first evidence on the association between firms' portfolios of policy choices and the presence of common directors across firms. While prior research examines the relation between overall board characteristics and corporate policies (see, Hermalin and Weisbach, 2001, for a general survey and Klein, 2002, for evidence on accounting choices), these studies do not address the important question of whether there is an association between firms' policy choices and individual director policy preferences. We directly tackle the old adage "there is no accounting for taste" by using an empirical approach that directly accounts for individual director effects. Our evidence strongly supports the existence and importance of individual director effects for a range of corporate policies directly overseen by boards of directors. These findings provide a new and different perspective on the relation between corporate board attributes and firms' governance, financial, disclosure, and strategic policies.

The business press is replete with examples of how certain managers and directors pursue their own distinctive corporate policies or business strategies. "Neutron" Jack Welch, former CEO of General Electric, and "Chainsaw" Al Dunlop, former CEO of Scott Paper, were both renowned for their willingness to initiate mass firings in the early 1990's. These individuals

clearly took actions that resulted in layoffs. However, were the layoff decisions uniquely attributable to the specific managers or would any executive have taken the same actions in similar circumstances?

While anecdotes support the notion of an "individual effect", it is difficult to separate firm and manager effects because they are almost always observed together. Bertrand and Schoar (2002) attempt to get around this problem by examining the consistency of corporate policy choices *across time* by tracking CEOs who move from one firm to another.[1] We undertake a similarly novel investigation in a slightly different setting by examining the consistency of corporate policy choices *across firms* by identifying corporate directors who simultaneously serve on multiple corporate boards. For example, Franklin D. Raines is the CEO and executive board member of Fannie Mae and he simultaneously serves as an outside director of PepsiCo. These multi-board membership cases provide a unique experimental setting to test whether an individual's skills or preferences are systematically and consistently reflected in firms' policies.

Recent studies have highlighted a board member's role as a strategic policy consultant to top managers (see, for example, Carpenter and Westphal, 2001). Therefore, we explore individual director influence across four key corporate policy categories: governance, financial, disclosure and investor relations, and strategic policies. We specifically focus on policies that are vetted through, approved by, or overseen by the board of directors. The governance policies include the structure of CEO compensation, the existence of a dual CEO/Chairman appointment, the number of outside directors, and the frequency of board meetings. The financial policies include dividend payouts, stock repurchases, cash holdings and leverage. The disclosure and investor relations policies include the frequency of management forecasts, and the outcomes of

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[1] In a related study on mutual funds, Baks (2001) attempts to distinguish between the performance attributable to a mutual fund and the performance attributable to the fund manager. Similar to the approach of Bertrand and Schoar (2002), he examines a sample of managers that switch funds during the 1990's.

investor relations activities such as analyst and institutional following. Finally, the strategic policies relate to firms' acquisition and restructuring decisions that must be vetted by the board of directors.

Given that it is difficult to specify *ex ante* which of these policies will be most influenced by which directors, we also create an aggregate director fixed effect measure that captures the average director impact across policies. This aggregate measure is estimated across all 18 policy policies and only those policies with statistically significant individual director fixed effects. These approaches allow us to capture the differential impact of individual directors across a full range of firms' corporate policies.

We begin our analysis by examining how much of the variation in firms' corporate policies can be attributed to the presence of individual board members. Similar to Bertrand and Schoar (2002), we attempt to separate the influence of individuals associated with a firm from those of the firm itself. In our unique multiple-board sample, we examine the role of individual skills or preferences in a *cross-sectional* setting by considering board members who sit on at least two different corporate boards *at the same time*. This approach avoids potential time-varying and performance-related confounding effects in a CEO-turnover setting. We first determine how much of the cross-sectional variability in firms' policy choices can be explained by board member fixed effects. Our results show that director-specific effects are economically and statistically significant determinants of a broad range of corporate policy choices. However, there are several competing explanations for this finding: (i) directors match with firms that all face similar economic circumstances, (ii) directors match with firms for reasons not captured by traditional economic factors, and/or (iii) directors impose their preferences on firms resulting in policies unrelated to traditional economic factors.

To distinguish between explanation (i) and explanations (ii) and (iii), we investigate how much of the *residual* variability in firms' policy choices can be explained by director fixed effects *after* controlling for traditional economic determinants of these policies. Consistent with prior research, we find that a comprehensive set firm-specific economic factors (i.e., size, performance, growth opportunities, risk, and lifecycle stage) and industry effects explain a significant fraction of firms' policies. However, director fixed effects provide significant incremental explanatory power for firms' policies over and above the traditional economic factors. This finding suggests that the commonality in firms' policies can result from directors imposing their preferences on firms (explanation (iii)) or traditional economic factors not completely capturing the matching process between director and firms (explanation (ii)). Under explanation (iii), corporate policies are initiated by directors and may come as a surprise to other stakeholders possibly because of corporate governance imperfections. Our follow-on empirical tests suggest that the matching interpretation (explanation (ii)) is more plausible because the magnitude of director fixed effects is unrelated to a director's tenure at a firm. In sum, our findings suggest a matching of firms and directors with similar economic characteristics and consistent policy preferences.

Finally, we examine factors that may mitigate or strengthen an individual director's influence on corporate policy choices. For a broad range of policies, we find that director influence decreases for (a) directors with many outside board appointments, (b) directors serving on boards with a large fraction of outside directors, and (c) directors serving on boards of large firms. We also examine whether an individual director's influence increases if he/she serves on a specific policy committee of the board of directors. The empirical tests demonstrate that director fixed effects for compensation policy choices are significant for directors who serve on a firm's

compensation committee, but are insignificant for directors not appointed to this committee. Together, these results suggest an important interplay between director influence and board and firm structure.

In summary, we document that individual director effects are important for a range of policies not previously considered in the literature. The innovative contribution of this paper is that we show that individual board member skills or preferences are often as important as traditional economic factors in determining a full range of firms' corporate policies. In addition, director effects are affected by the structure of the board and board members' competing outside activities.

The remainder of the paper is organized as follows. Section 2 outlines our empirical approach. Section 3 discusses the unique data used in the empirical tests. Section 4 discusses the results and section 5 concludes.

2. Empirical Approach

In this section, we outline an empirical approach to test for similarities in corporate policies across firms sharing common directors. Our main tests use director fixed effects to capture commonality in firms' policies. However, commonalities in firms' economic characteristics may explain the director fixed effects. Therefore, we also investigate how much of the variability in firms' policy choices is explained by director fixed effects *after* controlling for traditional economic determinants of these policies. We then undertake tests to distinguish between "matching" and "imposition" explanations for the director effects. Finally, we present empirical tests that examine whether a director's influence is affected by firm size, board

structure, the number of outside board appointments held by the director, and the director's committee assignments.

2.1 Existence of director effects

The literature on interlocking directorates supports the view that directors from other boards provide a potentially important conduit for information flows about business practices and policies (e.g., Mizruchi, 1996). Directors can transfer information about the implementation and efficiency of different practices by observing the consequences of management decisions (e.g., Haunschild, 1993). Directors can also learn about policy approaches through their communications with other directors in board meetings (e.g., Davis, 1991).

Prior studies in the economic and sociology literature have investigated individual policy choices in isolation. For example, Hallock (1997) investigates whether firms that have reciprocally interlocking boards of directors pay their CEOs more than other firms. The business sociology literature also investigates the individual outcomes of reciprocally interlocking boards (see, for example, Haunschild and Beckman, 1998, and Mizruchi, 1996).

Our approach is more general in that we attempt to quantify the extent to which firms' *portfolios* of corporate policies are associated with specific board members. The analysis focuses on 18 corporate policies under the direct oversight of a company's board of directors. We test for the existence of director effects for each policy in a cross-sectional setting using a sample of directors who sit on multiple firms' boards at the same time. The tests are based on a sequential series of nested and non-nested regressions that explain variation in firms' policy choices using (a) only director fixed effects, (b) only traditional economic factors captured by firm characteristics and industry fixed effects, and (c) the combination of firm characteristics, industry

fixed effects, and director fixed effects. Specifically, we estimate the following regressions to determine the relative and incremental explanatory power of traditional economic variables and director fixed effects:

$$Policy_i = \alpha + \Sigma_z\gamma_zDirector_{z,i} + \varepsilon_i \qquad\qquad [1a]$$

$$Policy_i = \alpha + \Sigma_x\beta_xEconomic\_Determinant_{x,i} + \varepsilon_i \qquad\qquad [1b]$$

$$Policy_i = \alpha + \Sigma_x\beta_xEconomic\_Determinant_{x,i} + \Sigma_y\lambda_yIndustry_{y,i} + \varepsilon_i \qquad\qquad [1c]$$

$$Policy_i = \alpha + \Sigma_x\beta_xEconomic\_Determinant_{x,i} + \Sigma_y\lambda_yIndustry_{y,i} + \Sigma_z\gamma_zDirector_{z,i} + \varepsilon_i \quad [1d]$$

where $Policy_i$ is a corporate policy variable for firm i. $Director_{z,i}$ is a board member fixed effect for director z. $Economic\_Determinant_{x,i}$ represents five firm-level control variables ($x=1$-$5)$ for firm i. In all specifications, we include firm size ($log(MV)$), performance (ROA), risk ($\sigma^2(ROA)$), growth opportunities (M/B), and firm lifecycle stage ($firm\ age$) as firm-level economic determinants of corporate policies. These firm-level characteristics represent a comprehensive set of major firm-level economic factors correlated with each of the corporate policy variables. $Industry_{y,i}$ represents the industry y fixed effect for firm i. The industry fixed effects capture a range of industry-related economic factors such as regulation, product market competition, and other institutional features that affect firms' corporate policies.

We begin the analysis by focusing on regression model [1a]. This model includes only the director fixed effects as explanatory variables for firms' corporate policies. If firms with common directors also pursue similar corporate policies, then this model should explain a statistically and economically significant fraction of the cross-sectional variation in firms' policies.

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2.2 Do economic factors explain director effects?

While model [1a] can test for the existence of commonality in firms' policies, it cannot explain the root cause of the director effects. In particular, commonality in corporate policies can be explained by: (i) policy matching of directors with firms facing similar economic factors, (ii) policy matching of directors and firms for reasons not captured by traditional economic factors, and/or (iii) directors imposing their preferences on firms resulting in policies unrelated to traditional economic factors. It should be noted that self-selection by directors is a common feature of all of these explanations. In fact, active choices by directors to select or accept board appointments is a *necessary* condition for individual director preferences to actually matter. However, the underlying motives and outcomes of directors' decisions is very different for each of the explanations. Given the commonality of self-selection, we must find other ways to discriminate between the explanations for the observed director effects.

One key distinction between these explanations is that the first explanation predicts that traditional economic factors will subsume the explanatory power of the director fixed effects estimated in model [1a].[2] Therefore, to distinguish between explanation (i) and explanations (ii) and (iii), we test whether director fixed effects have *incremental* explanatory power over traditional economic determinants of corporate policies. Regression model [1c] is used as a benchmark for the explanatory power of traditional economic factors. This regression includes firm-specific variables as well as industry fixed effects to capture the economic determinants of firms' policies choices. The incremental explanatory power of the director fixed effects, over and above the traditional economic factors, is then estimated with regression model [1d]. The

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[2] This approach assumes that traditional proxies used in the literature can fully capture the underlying economic determinants of firms' policies. We rely on previous literature to define these proxies.

incremental impact of the director fixed effects is calculated by comparing the adjusted R^2 from the economic model [1c] with the adjusted R^2 from the expanded model [1d] that includes the director fixed effects.

Jointly significant director fixed effects in model [1d] would indicate that traditional economic factors do not fully subsume the influence of individual directors. The joint statistical significance of the director fixed effects is determined using an F-test on the entire set of director fixed effects. One can also characterize the economic significance of the director fixed effects by comparing the difference in the adjusted R^2 between models [1c] and [1d] (i.e. with/without the director effects).

2.3 Do directors match or impose policy preferences?

If director fixed effects have incremental explanatory power over and above traditional economic determinants of corporate policies, then there are two remaining explanations for the director effects. Explanation (ii) suggests that directors and firms match policy preferences for reasons not captured by traditional economic factors. If matching is the explanation, then a firm's policies should pre-date the director's board appointment arrival and the director's tenure should be unrelated to the magnitude of the director fixed effects. On the other hand, explanation (iii) suggests a "push" (or "imposition") phenomenon where policy choices are initiated by a director, possibly to the surprise of other stakeholders. If this explanation is correct, then a director's influence on a firm's policies should become more pronounced the longer the director serves on the board of directors.

To test the effect of tenure on director fixed effects, we examine the association between the estimated magnitude of a director fixed effect and the director's tenure on the board of

directors. This association can be estimated for each of the 18 individual policy variables and for an aggregate model based on the average standardized magnitude of the director fixed effects across all 18 policy variables. The basic regression specification is as follows:

$$|F.E.(Policy\ Variable)_j| = \alpha + \beta_l Tenure_j + \varepsilon_j \qquad \text{[2a]}$$

where the dependent variable is either (a) the magnitude (absolute value) of the director j fixed effect estimated for a single policy variable from regression model [1d] or (b) the average of the magnitude (absolute value) of the 18 standardized director fixed effects estimated for director j from the regression models [1d]. We measure $Tenure_j$ as the across-firm average of the natural logarithm of the tenure of director j for his/her multiple board appointments.

This tenure regression allows us to differentiate between directors imposing their policy preferences on a firm versus directors and firms matching their policy preferences. If the "imposing" hypothesis is correct, then the director fixed effect should be stronger when the director has had more time to influence a firm's policies. An underlying assumption of the "imposing" explanation is that directors dictate policies that are in direct conflict with shareholders' interests. Recent research has shown that corporate governance imperfections and limitations in board structures can exacerbate these problems (see, for example, Hermalin and Weisbach, 2001). Therefore, in the next section, we outline an extension of model [2a] that includes additional control variables to capture cross-sectional differences in the ability of individual board members to pursue (potentially) inefficient policies.

2.4 Determinants of individual director influence

In this section, we examine factors that can affect the magnitude of individual director fixed effects. First, the media has recently spotlighted directors with multiple board appointments and raised questions whether patterns of mismanagement across firms are associated with these directors. In particular, there are claims that "professional" directors serving on numerous boards have little time to actually influence or monitor corporate decisions at any of the firms (see, for example, Carpenter and Westphal, 2001). As a result, these directors have little or no consistent influence on firms' policies. If more outside appointments limit a director's policy influence for any given firm, then:

(H1a) The magnitude of director fixed effects decrease in the number of outside board appointments.

However, Pritchard et al (2002) find little evidence that directors who sit on multiple boards shirk their responsibilities. This implies a plausible competing hypothesis that directors who serves on numerous boards are the most influential directors because their multiple appointments signal their skills, influence and unique tastes that are demanded by these firms. If multiple board appointments are correlated with a director's influence, then:

(H1b) The magnitude of director fixed effects increases in the number of outside board appointments.

Recent corporate governance scandals have also highlighted the importance of including more outside/independent directors on corporate boards. In fact, the new stock exchange listing requirements now stipulate minimum outside/independent director representation on boards. The

presence of numerous competing outside directors on a corporate board can mitigate the undue influence of any particular board member. This leads to the second hypothesis:

(H2) The magnitude of a director fixed effect decreases in the fraction of outsiders on the board of directors.

Prior research has shown that CEO's have a strong influence on firms' financial policies (see, for example, Bertrand and Schoar, 2002). If CEOs serve as both an inside director for their own firm and as outside directors for other firms, then the influence of these individuals may be more pronounced than directors who serve exclusively as outside directors (i.e. "professional" board members). If CEO-directors have more influence over firms' policies compared to professional directors, then:

(H3) The magnitude of a director fixed effect is larger if the director is a CEO of one of the firms he/she serves as a director.

Finally, directors who serve on the boards of large firms may face higher scrutiny and additional monitoring from other stakeholders such as securities regulators, analysts, institutional investors, and labor unions. These stakeholders are likely to be more prevalent and active in large firms. Therefore, if directors in large firms face additional oversight that limits their individual influence, then:

(H4) The magnitude of a director fixed effect decreases in firm size.

To test hypotheses H1-H4, we extend model [2a] as follows:

$$|F.E.(Policy\ Variable)_j| = \alpha + \beta_1 Tenure_j + \beta_2 NumBoards_j + \beta_3 FracOutside_j + \beta_4 CEO_j + \beta_5 Size_j + \varepsilon_j \quad [2b]$$

where the dependent variable is the same as defined in model [2b]. $NumBoards_j$ is the total number of corporate boards that director j serves on. $FracOutside_j$ is the average fraction of outside directors appointed to each board that director j serves on. CEO_j is an indicator variable that is equal to one if the director serves as CEO on one of the firms' boards, and zero otherwise. $Size_j$ is the average of the natural logarithm of the market capitalization of each firm that director j has a board appointment. $Tenure_j$ is the same as defined in regression model [2a].

2.5 Committee appointments and director influence

An individual director's influence on a specific policy is likely to increase if he/she serves on a related policy committee of the board of directors. The particular case of compensation committee appointments provides a unique context to test for director influence on a firm's compensation policies. Therefore, we re-estimate regression model [1d] for CEO compensation for two sub-samples. The first sub-sample consists of directors who serve on the compensation committee for all their board appointments. The second sub-sample consists of directors who never serve on the compensation committee of their boards. If there is a link between decision rights for and individual director influence on CEO compensation policy, then we predict that the director fixed effects will be less pronounced, or even nonexistent, in the second sub-sample.

3. Sample Selection

The empirical tests rely on several data sources. Data on director and board attributes are obtained for the year 1999 from the Investor Responsibility Research Center (*IRRC*) database.

Financial statement data are obtained from the *Compustat* annual database. The Compustat financial statement variables are measured over a five-year period beginning in fiscal 1995 and ending in fiscal 1999. We choose a five-year window to capture the average values of financial statement variables because the influence of a director should manifest itself in long-run discretionary policies.[3] Data on analyst following and institutional holdings are obtained from I/B/E/S and Spectrum, respectively. Information on CEO compensation is obtained from Execucomp. Finally, firms' discretionary earnings forecast/disclosure activities are obtained from First Call.

The IRRC collects proxy statement information for S&P500, the 400 S&P mid-cap firms and the small-cap S&P 600. Therefore, there are potentially 1,500 firms with director-level information. Table 1 reports information relating to directors for the year 1999. Missing data results in a sample of 1,378 different firms. Some 13,659 directors serve on the boards of the 1,378 firms. The sample consists of 8,648 independent directors, 2,141 affiliated directors and 2,870 employee directors. This means about 63% of directors are independent outsiders. This fraction is consistent with numbers reported in previous studies using different data sources (e.g., Bhagat and Black, 2000 and Richardson, 2002). Overall, IRRC data represent 10,577 unique directors.

Panel B of Table 1 shows the number of boards that each director serves on. Most directors (81%) serve on only one board. Of the remaining 2,036 directors that serve on multiple boards very few serve on more than 5 boards. Vernon E. Jordan Jr. and John L. Clendenin are the two directors who serve on eight boards each. They serve on boards of very large firms such

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[3] Obviously the five-year window assumes that the director served on the board for this period. We have run additional analyses on directors who have served on multiple boards for a period of 5 and 10 years respectively. The results are substantively similar for these smaller samples. The results for the 5 year tenure requirement are reported in Table 6.

as American Express, Dow Jones, JC Penney, Sara Lee and Xerox for Jordan; and Coca-Cola, Kroger, Home Depot and RJR Nabisco for Clendenin.

Panel C reports a measure of industry relatedness. For each director who serves on 2 or more boards, we examine the industry affiliation of each firm (using industry groupings as defined in Fama and French, 1997). We are trying to identify whether directors serve on boards in the same or different industries. This measure compares the number of industries that a director is associated with to the total number of boards that the director serves on. For example, a director who serves on 3 boards with 2 firms in the same industry and 1 in a different industry will have an industry-relatedness ratio equal to 2/3. It is clear from panel C that this industry relatedness measure is frequently equal to 1, irrespective of the number of boards served. This indicates that directors serve on boards in different industry groupings. Thus, any commonality we see across firms' corporate policy choices is unlikely to be solely driven by industry effects. Nonetheless, we still control for industry effects in the empirical analysis below.

The remaining panels in Table 1 provide more descriptive statistics on directors. Panel D outlines the affiliation of directors by number of boards served. Not surprisingly, a greater fraction of directors who serve on several boards are classified as independent directors. These individuals are often "professional" directors. Panel E reports descriptive statistics about board characteristics and director-specific information such as age and tenure. For our sample, 62% of directors are classified as outside directors. The mean (median) director is 59 (59) years old and has served on the board for 10 (7) years. There is considerable variation in both age and tenure. The youngest (oldest) director in our sample is 26 (94) years old. George E. Kane, at the ripe old age of 94, has served on the board of Panera Bread for 19 years. The median director has served for 7 years and the longest serving director is Richard H. Grant Jr., who had served on Reynolds

& Reynolds for 61 years as of 1999. We also provide descriptive statistics on board size and board composition. Similar to the results in Richardson (2002), the average board is comprised of 10 directors and the mean fraction of independent outsiders is 63 percent.

Finally, Panel F of Table 1 provides a breakdown of director age and tenure by the number of boards each director serves on. It is clear that older directors tend to serve on more boards. This is not surprising since experience is a critical factor in board selection (NACD, 2000 – Board Evaluation – Improving Director Effectiveness). There is no discernable pattern with tenure and the number of boards served on. The mean tenure is about 9-10 years irrespective of the number of boards a director serves on. It is difficult to interpret the results for directors who serve on 7 and 8 boards because there are very few observations in these categories.

3.1 Policy variables

We focus on corporate policy categories that are directly influenced by the board of directors. The four key categories are governance, financial, disclosure and investor relations, and strategic policies. Moreover, we specifically focus on 18 policies that are vetted through, approved by, or overseen by the board of directors. These policies are not fixed in stone and can vary over the tenure of a director. Following our discussion in section 2, we focus on the relation between director specificity and firms' longer-run policy choices. Therefore, all financial policy variables are calculated using averages of yearly data for the period 1995-1999. We choose this period as it immediately precedes the year for which have director data from *IRRC*. The averaging of the policy variables also smoothes out year-to-year fluctuations unrelated to director-specific effects.

Our final sample is restricted to the following set of firms: (1) firms with non-missing financial statement data from 1995-1999 from Compustat, CEO compensation data available for 1999, institutional ownership in 1999 from Spectrum, and director information available from *IRRC*; and (2) directors who serve on multiple boards.[4] This reduces the sample to 885 unique firms and 1,438 directors serving on multiple boards. The sample used for the primary regression tests in Table 3 consists of 3,428 director-firm observations. In the regression analysis in section 4, each director is assigned an indicator variable. This set of indicator variables identifies director fixed effects for our regression tests. Table 2 provides descriptive statistics for the four corporate policy categories.

3.1.1 Governance policy variables

We examine five major governance policies directly set by the board of directors including compensation, dual CEO-Chairman appointments, outsiders on the board, board size, and frequency of board meetings. Prior research has shown that the primary firm-level economic determinants of these policies are firm size, growth opportunities, and industry affiliation (see, for example, Murphy, 1999, Brickley, Coles, and Jarrell, 1997, and Hermalin and Weisbach, 2001). The descriptive statistics for these policy variables are presented in Panel A of Table 2. *CEO Stock Compensation$_i$* is the fraction of total CEO compensation that is stock based (value of restricted stock grants plus Black-Scholes value of stock option grants) for firm *i*. For our sample of the firms, approximately 1/3 of a CEO's current compensation is tied to share price. *Dual CEO/Chairman* is a dummy variable equal to one of the CEO is also the chairman of the board of the company, and zero otherwise. In this sample, approximately one quarter of the firms have CEOs who also hold the title of Chairman. *# Outsiders on Board* is the number of independent

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[4] We do not place a data availability requirement for the analyst following data (I/B/E/S) and management earnings forecasts (First Call). We assume that missing firm observations for these variables indicates that the firm had zero analyst following and the firm made no management forecasts.

directors serving on the board and *Board Size* is the total number of directors serving on board in 1999 as reported by IRRC. The mean values of *# Outsiders on Board* and *Board Size* are 6.65 and 10.32, respectively. *# Board Meetings* captures formal director meetings in fiscal year 1999 as reported by IRRC. Firms held an average of 7 formal board meetings in 1999.

3.1.2 Disclosure and investor relation policy variables

The key disclosure and investor relations policies we examine are related to management forecast activity and investor relations outcomes as measured by analyst and institutional following. Prior research has shown that the primary firm-level economic determinants of these policies are firm size, growth opportunities, performance, variance in earnings, and industry affiliation (see, for example, Bhushan, 1989, O'Brien and Bhushan, 1990, and Waymire, 1985). Panel B of Table 2 provides summary statistics for the disclosure and investor relations variables. Given that management forecasts (as captured by First Call) occurs infrequently in the overall population of firms[5], we characterize both (a) whether a firm made a management forecast in any year from 1995-1999, *Issue Mgmt Forecast*, and (b) the average annual number of management forecasts between 1995 and 1999, *# Mgmt Forecasts*.[6] The mean value of *Issue Mgmt Forecast (# Mgmt Forecasts)* is 0.13 (0.19).

Finally to indirectly capture the outcomes of firms' investor relations activities, we examine the extent to which analysts and institutional investors actively follow or invest in the firm. *Analyst Following* is the number of analysts following the firm in 1999 as reported by I/B/E/S. The mean analyst following is 12.12. *Institutional Holdings* is a percentage of a firm's common shares held by Institutional investors (as indicated by 13-F filings tabulated by

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[5] See, for example, Nagar, Nanda and Wysocki (2002). They use management forecast activity (likelihood and frequency) as a measure of firms' discretionary disclosure activities.
[6] Frequent management forecasts suggest that a firm has explicit policy of frequent disclosures to investors.

Spectrum). At the end of 1999, 58% of shares were held by institutional investors as classified by Spectrum.

3.1.3 Financial policy variables

Important financial policies include dividend payouts, share repurchases, the choice to stock-pile cash in anticipation of future acquisitions and investment acitivity, and financial leverage. Prior research has shown that the primary firm-level economic determinants of these policies are firm size, growth opportunities, stage in life cycle, performance, risk, and industry affiliation (see, for example, Fama and French, 2001, Opler, Pinkowitz, Stulz and Williamson, 1999). The descriptive statistics for the financial variables are reported in Panel C of Table 2. The key financial policy variables we investigate are *Dividends* (dividend scaled by average total assets), *Repurchases* (stock repurchases on common and preferred stock scaled by average total assets), *Cash Holdings* (dollar value of cash and market securities on the balance sheet scaled by total assets), and *Leverage* (book value of short term and long term debt scaled by total assets). These long-run policies require the explicit approval of the board and are periodically reviewed by the board of directors. The mean values of the payout variables, *Dividends* and *Repurchases,* are 0.016 and 0.023, respectively. Average (median) cash holdings are 10% (5%) of total assets which indicates outlier firms with large cash stockpiles. *Leverage* captures book leverage and has an average value of 0.23 for the sample period.

3.1.4 Strategic policy variables

The descriptive statistics for the acquisitions and restructuring policy variables are reported in Panel D of Table 2. Prior research has shown that the primary firm-level economic

determinants of these strategic policies are firm size, growth opportunities, stage in life cycle, performance, risk, and industry affiliation (see, for example, Francis, Hanna and Vincent, 1996, Aboody, Kasznik and Williams, 2000). The strategic policies we examine are directly reviewed by the board of directors. For example, a special board committee is often established to review and implement major corporate acquisition and merger transactions. We measure acquisition activity on three dimensions. *Acquisitions* is measured as cash outlays on acquisitions scaled by average total assets and captures the average value of takeover activity between 1995 and 1999. Average acquisitions were valued at 3% of total assets over this period. ACQ_{CNT} reflects the number of times that the firm reported material acquisition activities from 1995-1999. The median number of active acquisition years is 2 for the 5 year sample period. *Goodwill* (value of goodwill on the balance sheet scaled by average total assets) reflects the firm's tendency to implement certain acquisition strategies (stock or cash-based) and is captured in the accounting for these transactions. Average recorded goodwill is 3% of total assets.

Finally, we look at the tendency of the firm to engage in restructuring transactions that result in special items. This is captured in the average value and the frequency of special items reported in net income. *Special items* is the average value of special items scaled by total assets. $SPEC_{CNT}$ is the number of times annual special items were recorded from 1995-1999. If a director has a strong preference for axing divisions this will reflect itself in special items/writedowns.

4. Regression analysis

In our regression analysis of the determinants of the policy variables, we include a exhaustive set of controls to capture firm-specific economic factors that determine these policies.

In regressions [1b], (1c] and [1d], we include firm size, growth, performance, risk, and life cycle stage as firm-specific economic determinants of all policy choices. As surveyed in section 3, these variables cover a comprehensive set of major economic determinants of the policy variables in our study. The size variable is defined as the log of market capitalization (Compustat item 25 * Compustat item 199). Growth opportunities are measured using the market-to-book ratio. This is market capitalization scaled by book value of equity (Compustat item 60). The performance control is core return on assets (ROA), measured as operating income after depreciation (Compustat item 178) scaled by average total assets. Firm risk is calculated as the variance in ROA between 1995 and 1999. Finally, lifecycle stage is defined as number of years the firm has been listed on CRSP.

We also include a vector of 45 industry indicator variables based on the industry classification scheme outlined in Fama and French (1997). These indicator variables will tend to explain much of the variation in policies because industry economic factors such as competition, regulation, and technology tend to influence firms' policy choices. Therefore, regression model [1c] and [1d] include a fairly exhaustive set of traditional economic factors that are likely to influence firms' corporate policies.

4.1 Are director fixed effects significant?

Our primary empirical analysis is reported in Table 3. We report the impact of director fixed effects on governance, financial, disclosure and investor relations, and strategic policies in Panels A-C, respectively. We report the adjusted R^2 for the four separate estimations of model [1]. Regression model [1a] tests the explanatory power of the director fixed effects in isolation. In all cases, the director fixed effects explain a statistically significant fraction of the variation of

the 18 policy variables. The adjusted R^2 of these regressions ranges from 2.3% for the number of management forecasts to 38.3% for cash holdings. These numbers are certainly economically significant in comparison to the explanatory power of the firm-level economic determinants regressions (model [1b]). In fact, eight of the eighteen director effects regressions (model [1a]) have higher explanatory power than the firm-level economic determinants regressions (model [1b]).

4.2 Are director effects subsumed by economic factors?

In order to determine if the director effects merely capture firm-level economic attributes, we must determine if the director fixed effects have explanatory power *incremental to* traditional economic determinants of these policies. The second last column in the table presents the incremental explanatory power of the director effects over and above the firm-level and industry economic factors *{adj.R^2(model [1d]) – adj.R^2(model [1c])}*. The incremental explanatory power is economically significant for a number of policy variables including CEO stock compensation (4.3%), dividends (6.3%), cash holdings (14.0%), frequency of special items (4.7%), and goodwill (7.2%). In the last column, we report an F-test that tests the joint statistical significance of the director effects from regression model [1d]. The director effects are statistically significant for 15 of the 18 policy variables.

Table 4 presents additional evidence on the economic significance of the director effects for the 18 policy variables. For comparative purposes, we present the unconditional mean of each policy variable along side the interquartile spread of the director effects for each policy variable. For all policies, the interquartile spread for the estimated director effects is at least 20% of the mean of the each policy variable. In fact, the interquartile spread equals or exceeds the mean

value of the dual CEO/Chairman, management forecast, acquisition, goodwill and special item policy variables. These descriptive findings indicate that director effects can have an economically important impact on firms' policies.

4.3 Results on director influence

Given that the director fixed effects have incremental explanatory power over traditional economic determinants of corporate policies, then we must distinguish between the two remaining explanations for the director effects. Explanation (ii) suggests that directors and firms "match" policy preferences for reasons not captured by traditional economic factors. On the other hand, explanation (iii) suggests a "push" (or "imposition") phenomenon where policy choices are initiated by a director, possibly to the surprise of other stakeholders. If this explanation is correct, then a director's influence on a firm's policies should become more pronounced the longer the director serves on the board of directors.

We estimate regression [2b] to test the effect of tenure on magnitude of the director fixed effects. Panel A - Column A of Table 5 presents the results for an aggregate policy variable that uses the average standardized director fixed effect magnitude across all 18 policy variables. The coefficient on director *Tenure* is miniscule and statistically insignificant. This finding is inconsistent with directors imposing their policy preferences because the magnitude of the director effect is the same if the director has been there one year or twenty years. This result suggests a matching of firms and directors with consistent policy preferences. The insignificant results for *Tenure* also persist for the alternate definition of the aggregate director fixed effect variables calculated using only the individual policy variables with statistically-significant

director fixed effects (see Table 5, Panel A: Column 2).[7] It should be noted that the regressions control for other cross-sectional board attributes that limit an individual director's ability to impose his/her inefficient policy preferences.

We further explore the role of director influence by directly testing hypotheses H1-H4. We implement these tests using regression model [2b] and initially focus on the aggregate model that uses the average of the standardized director fixed effect magnitudes across the 18 policy variables (Table 5, Panel A: Column 1). The competing hypotheses H1a and H1b relate to whether a director's outside appointments mitigates or strengthens the director fixed effects. We find that the coefficient on the number of board appointments is negative and strongly significant. This finding is more consistent with hypothesis H1a and suggests that director influence becomes less pronounced when a director has many board appointments.

Hypothesis H2 predicts that director fixed effects are decreasing in the fraction of (competing) outsiders on the board of directors. As shown in Table 5, Panel A: Column 1, the coefficient on the average fraction of outside directors on the board is negative and statistically significant. This suggests that individual director effects are weaker in the presence of competing outside directors.

Hypothesis H3 predicts that director effects are more pronounced for directors who also serve as a CEO on one of the firms' boards. However, we find that the CEO dummy variable is not significant which indicates that director effects are no different for directors who serve as a CEO compared to "professional" directors (see Table 5, Panel A: Column 1).

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[7] Note that the director sample size drops from 1,438 to 1,433 observations for the alternate aggregate fixed effect variable. The alternate aggregate director fixed effect variable uses only significant individual director fixed effects. In our sample, 5 directors have insignificant director fixed effects for all 18 policy variables and, therefore, are dropped from the regression.

Hypothesis H4 predicts that individual directors of large firms will have a weaker influence on the firm's policies because they face additional monitoring from other stakeholders. Consistent with this hypothesis, we find that the coefficient on firm size is negative and strongly significant.

The empirical findings for hypotheses H1-H4 are essentially the same using the alternate definition of the aggregate director fixed effect variables calculated using only the individual policy variables with statistically-significant director fixed effects (see Table 5, Panel A: Column 2). Moreover, tests of hypotheses H1-H4 are also generally consistent for each of the 18 individual policy variables. Panel B of Table 5 summaries these findings results. Because it is difficult to interpret and compare the coefficient estimates, we present only the coefficient t-statistics from the 18 regressions in Panel B.

Finally, we present evidence on whether an individual director's influence increases if he/she serves on a specific policy committee of the board of directors. The particular case of the compensation committee provides a unique test of director influence on firms' compensation policies. Therefore, we again use model [1d] to estimate director fixed effects for the CEO compensation policy variable for two sub-samples of directors. The first sub-sample consists of 825 director-firm observations for directors who serve on the compensation committee for all board appointments. The F-test of the joint significance of the director fixed effects is statistically significant with a p-value of 0.05 (F-statistic=1.17). The second sub-sample consists of 1,316 director-firm observations for directors who never serve on the compensation committee of their boards. The F-test of the joint significance of the director fixed effects in this sub-sample is not significant (p-value=0.21, F-statistic=1.07). These results are consistent with

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the notion that individual director influence on a specific policy is more pronounced if the director sits on the board committee with decision rights over that policy.

4.4 Robustness analysis

Finally, we conduct a robustness test for our previous regressions. In Table 6, we re-estimate impact of director fixed effects for a sample of firms where the directors have served on each board for a minimum of five years. We implement this test because the policy variables are averaged over the 1995-1999 period. Therefore, we limit the set of directors to those who have had a chance to influence the policy variables of interest over the whole period. The impact of director fixed effects for each of the policy variables are very similar to those presented in our main regression results in Table 3. Therefore, the tenor of our conclusions is unchanged.

5. Conclusion

This study takes a first step toward answering the question of whether an individual board member's preferences or skills are reflected in firms *portfolios* of corporate policy choices. We extend the prior literature on corporate board structure and interlocks (i.e., Hermalin and Weishbach, 2001, and Mizruchi, 1996) by examining the role of individual directors on a full range of key policies. We begin our analysis by providing an indication of the importance of board members' effects on firms' observed corporate policies. Our objective is to document how much of the variation in firms' policies can be attributed to board member fixed effects. In our unique board member setting, we can examine the role of individual preferences in a cross-sectional setting by considering board members who sit on two or more different company boards *at the same time*. We then ask, after controlling for industry fix effects and other

important firm characteristics, how much of the unexplained variation in firms' policy choices can be explained by board member fixed effects.

Our results show that board of director effects are economically and statistically important determinants of a broad range of governance, disclosure, financial and strategic policy choices. We then attempt to distinguish between three competing interpretations of the significant director fixed effects. The commonality in corporate policies can potentially be explained by: (i) policy matching of directors with firms facing similar economic factors, (ii) policy matching of directors and firms for reasons not captured by traditional economic factors, and/or (iii) directors imposing their preferences on firms resulting in policies unrelated to traditional economic factors. Active choice by directors to select or accept board appointments is a common feature of each of these explanations. However, our empirical evidence is more consistent with the matching interpretation because (a) economic factors subsume some of the director effects (i.e., the director effects and the economic factors are correlated and have overlapping explanatory power for firms' policies), and (b) director-specific fixed effects are the same regardless of a director's tenure at a firm. We also document that the magnitude of director effects are decreasing in firm size, the number of outside board appointments held by a director, and the fraction of competing outside directors on the board. This is consistent with the notion that an individual director's influence is mitigated when there are more outside competing interests. Board committee assignments also appear to impact director influence for specific policies.

A caveat to our analysis is that we may actually understate the impact or importance of directors for firms' policies. This possibility arises because firms' selection of directors is likely to be endogenous. While we show that traditional economic factors subsume some of the director

fixed effects, it is possible that firms choose directors with the unique skills necessary to implement the economically-optimal policies. As a result, director effects may not provide incremental explanatory power over and above economic factors because the optimal policies are *already* determined by the underlying economic factors. However, the unique director is still vitally important in the implementation of these optimal policies.

The innovative contribution of this paper is that we show that individual director effects are an important determinant of firms' portfolios of policy choices. Given that corporate boards help establish and monitor firms' corporate policies, we show that individual director's help explain commonality in policies. While we document the existence of director fixed effects, we provide little evidence on what determines why a director tends to be conservative versus aggressive in his/her policy preferences. Recent research by Malmendier (2001) examines whether CEO "overconfidence" affects corporate investment and financing choices. Bertrand and Shoar (2001) also examine observable CEO characteristics such as education and age as determinants of policy choices. This type of analysis could be extended to our director setting.

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TABLE 1
Descriptive statistics on attributes of directors serving on boards of U.S. firms
Data from 1999 *Investor Responsibility Research Center (IRRC)* database

Panel A: Number of observations

Category	Number of observations
Unique firms	1,378
Unique directors	10,577
Director-firm observations	13,659
Employee directors	2,870
Independent directors	8,648
Affiliated directors	2,141

IRRC classifies each director on the board as either an (i) insider, (ii) affiliated, or (iii) independent outsider. Directors are classified as insiders if they are an employee of the firm, or an officer of the firm (if among the five most highly compensated individuals) or they have beneficial ownership of more than 50% of the firm's voting power (this may be aggregated if voting power is distributed among more than one member of a defined group; e.g. members of a family beneficially own less than 50% individually, but combined own more than 50%). Affiliated directors include former employees of the firm or its affiliates, relatives of current employee of the firm or its affiliates, directors who provides professional services to the firm or its affiliates or to its officers, has any transactional relationship with the firm or its affiliates, founders who are no longer employees, and directors employed by a significant customer or supplier. An independent director is one who has no connection to the firm other than board seat or that the connection is not significant enough to be reported in the proxy statement.

Panel B: Distribution of number of boards each director serves on

Number of boards	Frequency
1	8,541
2	1,336
3	464
4	161
5	51
6	15
7	7
8	2
Total	10,577

TABLE 1 – Continued

Panel C: Industry relatedness of the corporate boards that directors serve on

Number boards	N	Industry_relatedness				
		Mean	Std. Dev.	Q1	Median	Q3
2	1,336	0.96	0.14	1	1	1
3	464	0.95	0.13	1	1	1
4	161	0.95	0.12	1	1	1
5	51	0.95	0.11	1	1	1
6	15	0.97	0.07	1	1	1
7	7	0.86	0.08	0.86	0.86	0.86
8	2	0.94	0.09	0.88	0.94	1
Total	2,036	0.95	0.13	1	1	1

The variable *Industry_relatedness* is equal to the number of unique industry groupings that the director is associated with divided by the number of unique boards the director serves on. For example, a director who serves on the board of directors of 4 firms that are in 3 different industries will have an *Industry_relatedness* ratio equal to 3/4.

Panel D: Director affiliation by number of boards served on

Number of boards	Number unique directors	Number director-firm observations	Employee	Affiliated	Independent
1	8,541	8,541	2,193	1,500	4,848
2	1,336	2,672	425	338	1,909
3	464	1,392	178	172	1,042
4	161	644	55	74	515
5	51	255	15	42	198
6	15	90	3	7	80
7	7	49	1	1	47
8	2	16	0	7	9
TOTAL	10,577	13,659			

IRRC classifies each director on the board as either an (i) insider, (ii) affiliated, or (iii) independent outsider. Directors are classified as insiders if they are an employee of the firm, or an officer of the firm (if among the five most highly compensated individuals) or they have beneficial ownership of more than 50% of the firm's voting power (this may be aggregated if voting power is distributed among more than one member of a defined group; e.g. members of a family beneficially own less than 50% individually, but combined own more than 50%). Affiliated directors include former employees of the firm or its affiliates, relatives of current employee of the firm or its affiliates, directors who provides professional services to the firm or its affiliates or to its officers, has any transactional relationship with the firm or its affiliates, founders who are no longer employees, and directors employed by a significant customer or supplier. An independent director is one who has no connection to the firm other than board seat or that the connection is not significant enough to be reported in the proxy statement.

TABLE 1 - Continued

Panel E: Descriptive statistics on board characteristics and director age and tenure

	N	Mean	Std. Dev.	Q1	Median	Q3
Board Size	1,378	9.9	3.2	8	9	12
Frac. Outsiders	1,378	0.62	0.19	0.50	0.67	0.78
Director Age	10,577	58.8	9.1	52	59	65
Director Tenure	10,577	10.1	8.6	4	7	14

Director Age is the age of the director in 1999. *Director Tenure* is equal to the number of years the director served on the board of a given firm. *Board Size* is equal to the number of directors that serve on the board. *Frac. Outsiders* is the fraction of the board that is comprised of independent outsider directors.

Panel F: Distribution of director age and tenure by number of board appointments

# Boards served on	Mean	Std. Dev.	Q1	Median	Q3
			Director Age		
1	58.5	9.5	52	58	65
2	59.6	7.6	55	60	65
3	60.0	6.9	55	60	66
4	60.9	5.8	58	62	65
5	62.3	5.7	59	64	66.4
6	62.2	5.6	57	64.2	66
7	63.1	3.3	N/A	63	N/A
8	64.0	N/A	N/A	64	N/A
			Director Tenure		
1	10.2	8.8	4	8	14
2	9.0	5.8	4.5	7.5	11.5
3	9.0	5.2	5.2	7.7	11.7
4	8.6	4.3	5.3	7.8	11.3
5	9.4	5.1	5.6	9	11.8
6	9.7	4.1	6.2	7.7	12.8
7	7.5	2.3	N/A	8.6	N/A
8	13.6	N/A	N/A	13.6	N/A

Director Age is the age of the director in 1999. *Director Tenure* is equal to the number of years the director served on the board of a given company.

TABLE 2
Descriptive statistics on firms' policy choice variables

The sample includes 885 firms with data available from IRRC, Compustat, Execucomp, and Spectrum with directors who serve on multiple boards. The financial statement-based policy variables are based on 5-year average values between 1995-1999.

Panel A: Governance policies

Variable	Mean	Std. Dev.	Q1	Median	Q3
CEO Stock Comp	0.33	0.17	0.21	0.32	0.44
Dual CEO/Chair	0.26	-	-	-	-
# Outsiders on Board	6.65	2.75	5	6	8
Board Size	10.32	3.04	8	10	12
# Board Meetings	7.00	2.70	5	6	8

CEO Stock Compensation is the fraction of total CEO compensation that is stock based as reported by ExecuComp. *Dual CEO/Chair* is equal to 1 if the CEO is also chairman of the board, and 0 otherwise. *# Outsiders on Board* is the number of outside directors serving on the board as reported by IRRC. *Board Size* is the # of directors serving on the board as reported by IRRC. *# Board Meetings* is the number of board meetings held in 1999 as reported by IRRC.

Panel B: Financial policies

Variable	Mean	Std. Dev.	Q1	Median	Q3
Dividends	0.016	0.023	0.001	0.010	0.023
Repurchases	0.023	0.034	0.002	0.011	0.030
Cash Holdings	0.10	0.14	0.02	0.05	0.12
Leverage	0.23	0.15	0.12	0.23	0.34

Dividends is cash dividends on common and preferred stock (# 127) scaled by average total assets. *Repurchases* is stock repurchases on common and preferred stock (# 115) scaled by average total assets. *Cash Holdings* is the level of cash and short term investments (# 1) deflated by end of year assets (# 6). *Leverage* is the book value of short-term debt (#34) and long-term debt (#9) scaled by end of year assets.

TABLE 2 - Continued

Panel C: Disclosure and investor relations policies

Variable	Mean	Std. Dev.	Q1	Median	Q3
Issue Mgmt Forecast	0.13	-	-	-	-
# Mgmt Forecasts	0.19	0.56	0	0	0
Analyst Following	12.12	7.94	5.8	10.2	17.2
Institutional Holdings	0.58	0.21	0.47	0.61	0.73

Issue Mgmt Forecast is equal to 1 if the firm issued a management forecast between 1995 and 1999, and zero otherwise. *# Mgmt Forecast* is the average number of management forecasts issued each year between 1995 and 1999 as reported by First Call. *Analyst Following* is the number of analysts issuing annual forecasts as reported by I/B/E/S in 1999. *Institutional Holdings* is a percentage of a firm's common shares held by institutional investors (as indicated by 13-F filings tabulated by Spectrum).

Panel D: Strategic policies

Variable	Mean	Std. Dev.	Q1	Median	Q3
Acquisitions	0.03	0.05	0	0.01	0.04
ACQ$_{CNT}$	2.24	1.92	0	2	4
Goodwill	0.06	0.10	0	0.01	0.09
SpecialItems	-0.001	0.021	-0.014	-0.003	0
SPEC$_{CNT}$	2.43	1.54	1	2	4

Acquisitions is the average from 1995-1999 of outlays on new acquisitions (# 129) scaled by average total assets. *ACQ$_{CNT}$* is the sum of firm-year indicator variables equal to 1 if *Acquisitions* is different from 0 in a given year, 0 otherwise. For example, a firm reporting non-zero acquisitions in 3 years out of the 5 years we examine (1995-1999) would have *ACQ$_{CNT}$* equal to 3. *Special Items* is the average from 1995-1999 of item #17, deflated by annual average total assets. *SPEC$_{CNT}$* is the sum of firm-year indicator variables equal to 1 if *Special Items* is different from 0 in a given year, 0 otherwise. For example, a firm reporting non-zero special items in 3 years out of the 5 we examine (1995-1999) would have *SPEC$_{CNT}$* equal to 3. *Goodwill* is the average value (1995-1999) of the level of goodwill (#204) scaled by average total assets.

TABLE 3
Regression of policy variables on firm factors and industry and director fixed effects

Regression of policy choice variables on firm economic characteristics and industry and director fixed effects. All regressions have 3,428 director-firm observations, comprising 1,438 unique directors across 885 firms.

$$Policy_i = \alpha + \Sigma_z \gamma_z Director_{z,i} + \varepsilon_i \qquad (1a)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \varepsilon_i \qquad (1b)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \Sigma_y \lambda_y Industry_{y,i} + \varepsilon_i \qquad (1c)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \Sigma_y \lambda_y Industry_{y,i} + \Sigma_z \gamma_z Director_{z,i} + \varepsilon_i \qquad (1d)$$

Panel A: Determinants of governance policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (1d) – (1c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
CEO Stock Compensation	20.2%	26.7%	36.8%	41.1%	4.3%	1.17**
Dual CEO/Chair	4.8%	3.1%	7.4%	9.5%	2.1%	1.05
# Outsiders on Board	17.2%	31.6%	46.7%	49.6%	2.9%	1.14**
Board Size	15.2%	36.2%	52.1%	55.3%	3.2%	1.16**
# Board Meetings	6.4%	9.3%	20.1%	22.5%	2.4%	1.07^

Panel B: Determinants of financial policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (1d) – (1c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
Dividends	10.2%	36.3%	53.7%	60.0%	6.3%	1.37**
Repurchases	8.1%	32.7%	39.7%	42.7%	3.0%	1.12*
Cash Holdings	38.3%	23.8%	43.8%	57.8%	14.0%	1.78**
Leverage	4.1%	7.8%	30.1%	32.3%	2.2%	1.07^

TABLE 3 - Continued

Panel C: Determinants of disclosure and investor relations policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (d - c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
Issue Mgmt Forecast	3.0%	0.5%	7.0%	9.5%	2.5%	1.06^
# Mgmt Forecasts	2.3%	1.1%	10.9%	13.7%	2.8%	1.07^
Analyst Following	20.2%	69.9%	78.1%	78.7%	0.6%	1.06
Institutional Holdings	6.1%	0.5%	14.9%	17.6%	2.7%	1.08^

Panel D: Determinants of strategic policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (d - c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
Acquisitions	5.6%	9.8%	20.6%	23.4%	2.8%	1.08*
Special Items	9.9%	8.3%	17.5%	20.8%	3.3%	1.10*
ACQ$_{CNT}$	2.5%	4.0%	23.6%	24.5%	0.9%	1.03
SPEC$_{CNT}$	6.9%	3.2%	16.9%	21.6%	4.7%	1.14**
Goodwill	5.6%	3.7%	16.9%	24.1%	7.2%	1.22**

**, *, and ^ indicate significance at better than the 1%, 5% and 10% levels. All policy variables are as defined in Table 2. Economic determinants included in the regressions are *Size* (log of market capitalization [25*#199]), *Book-to-market* (book value of common equity [#60], divided by market capitalization), *ROA (*operating income after depreciation [#178] scaled by average total assets), *FirmAge* (log of the number of years the firm has returns data available on CRSP) and the variability of ROA from 1995-1999. *Industry* is a vector of industry indicator variables defined according to Fama-French industry classifications. There are 46 unique industry groupings in this analysis. *Director* is a vector of director indicator variables. There are 1,438 unique directors in this analysis.

TABLE 4
Economic significance of director fixed effects
The sample comprises 1,438 directors who serve on the boards of 885 firms. Firms are required to have policy variable from IRRC, Compustat, Execucomp, and Spectrum. The financial statement-based policy variables are based on 5-year average values between 1995 and 1999.

Panel A: Governance policies

Variable	Sample mean of raw policy variable	Interquartile spread of estimated director fixed effects for policy
CEO Stock Comp	0.33	0.12
Dual CEO/Chair	0.26	0.42
# Outsiders on Board	6.65	1.82
Board Size	10.32	2.01
# Board Meetings	7.00	2.04

CEO Stock Compensation is the fraction of total CEO compensation that is stock based as reported by ExecuComp. *Dual CEO/Chair* is equal to 1 if the CEO is also chairman of the board, and 0 otherwise. *# Outsiders on Board* is the number of outside directors serving on the board as reported by IRRC. *Board Size* is the # of directors serving on the board as reported by IRRC. *# Board Meetings* is the number of board meetings held in 1999 as reported by IRRC.

Panel B: Financial policies

Variable	Sample mean of raw policy variable	Interquartile spread of estimated director fixed effects for policy
Dividends	0.016	0.010
Repurchases	0.023	0.016
Cash Holdings	0.10	0.05
Leverage	0.23	0.10

Dividends is cash dividends on common and preferred stock (# 127) scaled by average total assets. *Repurchases* is stock repurchases on common and preferred stock (# 115) scaled by average total assets. *Cash Holdings* is the level of cash and short term investments (# 1) deflated by end of year assets (# 6). *Leverage* is the book value of short-term debt (#34) and long-term debt (#9) scaled by end of year assets.

Panel C: Disclosure and investor relations policies

Variable	Sample mean of raw policy variable	Interquartile spread of estimated director fixed effects for policy
Issue Mgmt Forecast	0.13	0.28
# Mgmt Forecasts	0.19	0.33
Analyst Following	12.12	3.63
Institutional Holdings	0.58	0.15

Issue Mgmt Forecast is equal to 1 if the firm issued a management forecast between 1994 and 1999, and zero otherwise. *# Mgmt Forecast* is the average number of management forecasts issued each year between 1994 and 1999 as reported by First Call. *Analyst Following* is the number of analysts issuing annual forecasts as reported by I/B/E/S in 1999. *Institutional Holdings* is a percentage of a firm's common shares held by institutional investors (as indicated by 13-F filings tabulated by Spectrum).

Panel D: Strategic policies

Variable	Sample mean of raw policy variable	Interquartile spread of estimated director fixed effects for policy
Acquisitions	0.03	0.03
ACQ$_{CNT}$	2.24	1.64
Goodwill	0.06	0.06
SpecialItems	-0.01	0.01
SPEC$_{CNT}$	2.43	1.40

Acquisitions is the average from 1995-1999 of outlays on new acquisitions (# 129) scaled by average total assets. *ACQ$_{CNT}$* is the sum of firm-year indicator variables equal to 1 if *Acquisitions* is different from 0 in a given year, 0 otherwise. For example, a firm reporting non-zero acquisitions in 3 years out of the 5 years we examine (1995-1999) would have *ACQ$_{CNT}$* equal to 3. *Special Items* is the average from 1995-1999 of item #17, deflated by annual average total assets. *SPEC$_{CNT}$* is the sum of firm-year indicator variables equal to 1 if *Special Items* is different from 0 in a given year, 0 otherwise. For example, a firm reporting non-zero special items in 3 years out of the 5 we examine (1995-1999) would have *SPEC$_{CNT}$* equal to 3. *Goodwill* is the average value (1995-1999) of the level of goodwill (#204) scaled by average total assets.

TABLE 5
Relation between director fixed effects and director/firm characteristics

This table presents cross-sectional regressions of the estimated magnitude of director fixed effects (derived from regression results in Table 3) on *Director Tenure* (average natural logarithm of director tenure across board appointments)*,* the *# Boards Director Serves On*, the *Fraction of Outside Directors on Board* (average across director's multiple board appointments), a dummy variable if the *Director is CEO for at Least One Firm*, and *Firm Size* (average of log(market value of equity) across firm appointments). The sample consists of 1,438 unique director observations.

$$|Avg\ director\ fixed\ effect_j| = \alpha + \beta_1 Tenure_j + \beta_2 NumBoards_j + \beta_3 FracOutside_j + \beta_4 CEO_j + \beta_5 Size_j + \varepsilon_j \qquad [2b]$$

Panel A – Average standardized director fixed effects

The dependent variable is calculated as the average magnitude of the standardized director fixed effect across the separate policy regressions estimated in Table 3. The director effect for each policy is standardized to a mean zero and unit variance variable. The dependent variable is the last column is recalculated for *each director* to include only those director effects for that individually significant at the 10% level.

Determinants of Director Influence	Predicted Sign	Dependent variable: Average standardized director fixed effect across 18 policy variables	Dependent variable: Average standardized director fixed effect across policies with statistically significant individual director fixed effects
Director Tenure (director average)	+/0	-0.003 (-0.25)	-0.02 (-0.95)
# Boards Director Serves On	+/-	-0.06[**] (-5.61)	-0.22[**] (-10.97)
Fraction of Outside Directors on Board (director average)	-	-0.35[**] (-5.28)	-0.79[**] (-6.58)
Director is CEO for at least one firm (dummy variable)	+	0.02 (1.46)	-0.01 (-0.24)
Firm Size (director average)	-	-0.01 (-1.64)	-0.06[**] (-5.27)
Regression R^2		4.8%	14.4%
# Obs (see footnote 7)		1,438	1,433

TABLE 5 - Continued

Panel B: Individual policies: Determinants of magnitude of director fixed effects

Policy variable	Tenure	#Boards	FracOutside	CEO dum	Firm Size
Stock Compensation	-0.25	1.60	-2.89	1.27	-3.92
Dual CEO/Chair	-0.94	-1.38	3.27	3.34	-1.67
# Outsiders on Board	0.42	-4.50	-0.14	-1.32	-0.59
Board Size	-1.02	-2.91	-4.36	-1.14	-0.48
# Board Meetings	-0.05	-3.87	-1.92	0.34	-1.02
Dividends	0.97	-0.64	0.26	0.17	2.39
Repurchases	0.16	0.17	-1.52	-0.38	-4.05
Cash Holdings	-0.56	0.55	5.69	1.06	-1.28
Leverage	-1.80	1.40	-0.44	-0.69	1.54
Issue Mgmt Forecast	-0.17	-8.59	-1.56	2.16	0.49
# Mgmt Forecasts	-0.91	-1.77	1.23	0.02	3.17
Analyst Following	1.43	-4.46	-4.46	-0.46	4.47
Institutional Holdings	1.34	-0.74	-7.04	2.87	-0.17
Acquisitions	-2.07	-1.31	-2.91	-0.99	-6.50
ACQ_{CNT}	-1.10	-1.46	-1.89	0.34	1.52
Goodwill	-1.71	-0.69	-3.86	1.62	-1.05
SpecialItems	2.56	-0.56	-1.69	-1.08	-1.50
$SPEC_{CNT}$	2.36	-0.58	-3.68	0.59	-0.03

** indicates significance at better than the 1% level. The governance, disclosure, financial, and strategic policy variables are defined in Table 2. The dependent variable in each of these regressions is the estimated magnitude of the director fixed effect for the respective policy variable. These fixed effects are from regression model (1d) in Table 3. We take the absolute value of these fixed effects as we are interested in the magnitude of director's influence on policy variables.

TABLE 6
Robustness analysis: Directors with extended service

Regression of policy choice variables on firm economic characteristics and industry and director fixed effects. The following robustness analysis is based on a restricted sample of directors who have served on the board for at least 5 years. The resulting sample is comprised of 2,019 director-firm observations. The corporate policy variables are defined in Table 2.

$$Policy_i = \alpha + \Sigma_z \gamma_z Director_{z,i} + \varepsilon_i \qquad (1a)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \varepsilon_i \qquad (1b)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \Sigma_y \lambda_y Industry_{y,i} + \varepsilon_i \qquad (1c)$$
$$Policy_i = \alpha + \Sigma_x \beta_x Economic\_Determinant_{x,i} + \Sigma_y \lambda_y Industry_{y,i} + \Sigma_z \gamma_z Director_{z,i} + \varepsilon_i \qquad (1d)$$

Panel A: Determinants of governance policies

Policy Variable	Model Adjusted R^2 (1a)	(1b)	(1c)	(1d)	Incremental R^2 (d – c)	F-test on *Director*
CEO Stock Compensation	21.7%	26.2%	35.6%	43.0%	7.4%	1.29**
Dual CEO/Chair	6.7%	3.9%	8.1%	11.7%	3.6%	1.09^
# Outsiders on Board	21.8%	32.7%	47.6%	50.5%	2.9%	1.13*
Board Size	14.9%	37.2%	52.6%	55.0%	2.4%	1.12*
# Board Meetings	8.7%	10.1%	22.3%	26.0%	3.7%	1.11*

Panel B: Determinants of financial policies

Policy Variable	Model Adjusted R^2 (1a)	(1b)	(1c)	(1d)	Incremental R^2 (d – c)	F-test on *Director*
Dividends	13.3%	38.3%	54.9%	61.9%	7.0%	1.42**
Repurchases	9.3%	34.7%	40.4%	45.2%	4.8%	1.20**
Cash Holdings	37.7%	25.5%	42.8%	54.9%	12.1%	1.61**
Leverage	6.0%	7.4%	28.8%	32.5%	3.7%	1.12*

TABLE 6 - Continued

Panel C: Determinants of disclosure and investor relations policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (d – c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
# Mgmt Forecasts	4.2%	0.8%	12.9%	14.4%	1.5%	1.04
Analyst Following	21.8%	70.7%	78.8%	79.9%	1.1%	1.14*
Issue Mgmt Forecast	3.2%	0.4%	7.6%	9.3%	1.7%	1.04
Institutional Holdings	7.6%	0.7%	15.7%	20.1%	4.4%	1.13*

Panel D: Determinants of strategic policies

Policy Variable	Model Adjusted R^2				Incremental R^2 (d – c)	F-test on *Director*
	(1a)	(1b)	(1c)	(1d)		
Acquisitions	9.2%	11.1%	23.8%	28.3%	4.5%	1.14*
ACQ_{CNT}	5.9%	4.5%	24.9%	27.6%	2.7%	1.08^
Goodwill	6.9%	3.6%	18.7%	25.9%	7.2%	1.22**
Special Items	12.7%	7.5%	16.3%	21.0%	4.7%	1.13*
$SPEC_{CNT}$	6.5%	2.9%	16.2%	20.9%	4.7%	1.14*

**, *, and ^ indicate significance at better than the 1%, 5% and 10% levels. All policy variables are as defined in Table 2. We report the F-test for the vector of director indicator variables in model (d). Economic determinants included in the regressions are *Size* (log of market capitalization [25*#199]), *Book-to-market* (book value of common equity [#60], divided by market capitalization), *ROA (*operating income after depreciation [#178] scaled by average total assets), *FirmAge* (log of the number of years the firm has returns data available on CRSP) and the variability of ROA from 1995-1999. *Industry* is a vector of industry indicator variables defined according to Fama-French industry classifications. There are 46 unique industry groupings in this analysis. *Director* is a vector of director indicator variables. There are 868 unique directors in this analysis across 2,019 director-firm observations.